

Result	No.	Score	Query	Match	Length	DB	ID	Description	Summaries
-	1	3406	100.0	652	14	US-10-232-665-2	Sequence 2, App1		
	2	3406	100.0	652	15	US-10-614-076-98	Sequence 98, App1		
	3	3406	100.0	652	15	US-10-614-076-111	Sequence 111, App1		
	4	3406	100.0	652	15	US-10-782-141-11	Sequence 11, App1		
	5	3402	99.9	652	15	US-10-614-076-68	Sequence 68, App1		
	6	3401	99.9	652	14	US-10-232-665-6	Sequence 6, App1		
	7	3401	99.9	652	15	US-10-614-076-14	Sequence 14, App1		
	8	3400	99.8	652	15	US-10-614-076-32	Sequence 32, App1		
	9	3400	99.8	652	15	US-10-614-076-18	Sequence 48, App1		
	10	3399	99.8	652	15	US-10-614-076-14	Sequence 44, App1		
	11	3399	99.8	652	15	US-10-614-076-54	Sequence 54, App1		
	12	3398	99.8	652	15	US-10-614-076-8	Sequence 8, App1		
	13	3398	99.8	652	15	US-10-614-076-26	Sequence 26, App1		
	14	3398	99.8	652	15	US-10-614-076-42	Sequence 42, App1		
	15	3396	99.7	652	15	US-10-614-076-12	Sequence 12, App1		
	16	3396	99.7	652	15	US-10-614-076-64	Sequence 64, App1		
	17	3395	99.7	652	15	US-10-614-076-10	Sequence 10, App1		
	18	3395	99.7	652	15	US-10-614-076-14	Sequence 34, App1		
	19	3393	99.6	652	15	US-10-614-076-20	Sequence 20, App1		
	20	3393	99.6	652	15	US-10-614-076-66	Sequence 66, App1		
	21	3392	99.6	652	15	US-10-614-076-6	Sequence 6, App1		
	22	3392	99.6	652	15	US-10-614-076-30	Sequence 30, App1		
	23	3392	99.6	652	15	US-10-614-076-60	Sequence 60, App1		
	24	3390	99.5	652	15	US-10-614-076-16	Sequence 18, App1		
	25	3390	99.5	652	15	US-10-614-076-18	Sequence 40, App1		
	26	3389	99.5	652	15	US-10-614-076-40	Sequence 4, App1		
	27	3389	99.5	652	15	US-10-614-076-4	Sequence 52, App1		
	28	3387.5	99.5	651	15	US-10-614-076-52	Sequence 24, App1		
	29	3387	99.4	652	15	US-10-614-076-24	Sequence 28, App1		
	30	3386	99.4	652	15	US-10-614-076-18	Sequence 46, App1		
	31	3385	99.4	652	15	US-10-614-076-4	Sequence 22, App1		
	32	3382	99.3	652	15	US-10-614-076-22	Sequence 36, App1		
	33	3380	99.2	652	15	US-10-614-076-16	Sequence 38, App1		
	34	3380	99.2	652	15	US-10-614-076-38	Sequence 50, App1		
	35	3379	99.2	652	15	US-10-614-076-50	Sequence 2, App1		
	36	3377	99.1	652	15	US-10-614-076-10	Sequence 8, App1		
	37	3377	99.1	653	14	US-10-232-665-14	Sequence 14, App1		
	38	3377	99.1	653	14	US-10-232-665-16	Sequence 16, App1		
	39	3377	99.1	653	14	US-10-232-665-37	Sequence 37, App1		
	40	3377	99.1	653	14	US-10-232-665-39	Sequence 39, App1		
	41	3377	99.1	653	14	US-10-232-665-39	Sequence 100, App1		
	42	3377	99.1	653	15	US-10-614-076-100	Sequence 108, App1		
	43	3375	99.1	652	15	US-10-614-076-108	Sequence 12, App1		
	44	3373	99.0	653	14	US-10-232-665-12	Sequence 22, App1		
	45	3373	99.0	653	14	US-10-232-665-22	Sequence 24, App1		
	46	3373	99.0	653	14	US-10-232-665-24	Sequence 56, App1		
	47	3366.5	98.8	651	15	US-10-614-076-56	Sequence 50, App1		
	48	3366	98.8	651	15	US-10-614-076-56	Sequence 10, App1		
	49	3366	98.8	653	14	US-10-232-665-18	Sequence 18, App1		
	50	3366	98.8	653	14	US-10-232-665-20	Sequence 20, App1		
	51	3364	98.8	652	15	US-10-614-076-62	Sequence 62, App1		
	52	3361	98.7	652	15	US-10-232-665-4	Sequence 4, App1		
	53	3361	98.7	652	15	US-10-614-076-110	Sequence 110, App1		
	54	3358.5	98.6	651	15	US-10-614-076-58	Sequence 58, App1		
	55	3212	94.3	659	15	US-10-614-076-112	Sequence 112, App1		
	56	2582	75.8	493	15	US-10-614-076-70	Sequence 70, App1		
	57	2341.5	68.7	644	9	US-09-943-692-2	Sequence 2, App1		
	58	2341.5	68.7	644	14	US-10-239-346-2	Sequence 2, App1		
	59	2341.5	68.7	644	16	US-10-487-846-2	Sequence 2, App1		
	60	2341.5	68.7	652	15	US-10-614-076-113	Sequence 113, App1		
	61	2341.5	68.7	652	16	US-10-614-076-20	Sequence 9, App1		
	62	2341.5	68.7	652	16	US-10-782-141-10	Sequence 10, App1		
	63	2283.5	67.0	644	14	US-10-222-441-2	Sequence 2, App1		
	64	2165	63.6	606	14	US-10-239-346-11	Sequence 11, App1		
	65	2165	63.6	606	16	US-10-487-846-11	Sequence 11, App1		
	66	2152	63.2	649	15	US-10-614-076-109	Sequence 109, App1		
	67	2138.5	62.8	597	14	US-10-239-346-4	Sequence 4, App1		
	68	2138.5	62.8	597	14	US-10-487-846-16	Sequence 2, App1		
	69	2138.5	62.8	597	16	US-10-239-346-13	Sequence 13, App1		
	70	2133.5	62.6	597	16	US-10-487-846-13	Sequence 15, App1		
	71	2129.5	62.6	601	14	US-10-239-346-15	Sequence 21, App1		
	72	2129.5	62.5	601	16	US-10-487-846-15	Sequence 9, App1		
	73	2129.5	62.4	598	14	US-10-239-346-9	Sequence 21, App1		
	74	2125	62.4	598	14	US-10-487-846-21	Sequence 19, App1		
	75	2125	62.4	598	16	US-10-239-346-9	Sequence 19, App1		
	76	2120	62.2	597	14	US-10-487-846-15	Sequence 21, App1		
	77	2120	62.2	597	16	US-10-239-346-9	Sequence 19, App1		
	78	2116	62.1	602	14	US-10-239-346-9	Sequence 19, App1		
	79	2116	62.1	602	16	US-10-487-846-19	Sequence 19, App1		
	80	2115	62.1	596	14	US-10-239-346-9	Sequence 7, App1		
	81	2115	62.1	596	16	US-10-487-846-7	Sequence 7, App1		
	82	2106	61.8	600	14	US-10-239-346-17	Sequence 17, App1		
	83	2106	61.8	600	16	US-10-487-846-17	Sequence 17, App1		
	84	1272.5	37.4	1167	14	US-10-487-846-17	Sequence 1, App1		
	85	1215	35.7	675	15	US-10-606-320-74	Sequence 74, App1		
	86	1214	35.6	675	15	US-10-606-320-42	Sequence 42, App1		

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result	No.	Score	Query	Match	Length	DB	ID	Description
-	1	3406	100.0	652	14	US-10-232-665-2	Sequence 2, App1	
	2	3406	100.0	652	15	US-10-614-076-98	Sequence 98, App1	
	3	3406	100.0	652	15	US-10-614-076-111	Sequence 111, App1	
	4	3406	100.0	652	15	US-10-782-141-11	Sequence 11, App1	
	5	3402	99.9	652	15	US-10-614-076-68	Sequence 68, App1	
	6	3401	99.9	652	14	US-10-232-665-6	Sequence 6, App1	
	7	3401	99.9	652	15	US-10-614-076-14	Sequence 14, App1	
	8	3400	99.8	652	15	US-10-614-076-32	Sequence 32, App1	
	9	3400	99.8	652	15	US-10-614-076-18	Sequence 48, App1	
	10	3399	99.8	652	15	US-10-614-076-14	Sequence 44, App1	
	11	3399	99.8	652	15	US-10-614-076-54	Sequence 54, App1	
	12	3398	99.8	652	15	US-10-614-076-8	Sequence 8, App1	
	13	3398	99.8	652	15	US-10-614-076-26	Sequence 26, App1	

87	1212.5	35.6	670	13	US-10-032-717-44	App1
88	1212.5	35.6	670	14	US-10-014-637-44	App1
89	1211.1	35.6	673	13	US-10-032-717-22	Sequence 44, App1
90	1211.1	35.6	673	14	US-10-014-637-22	Sequence 22, App1
91	1210.5	35.5	670	13	US-10-032-717-24	Sequence 22, App1
92	1210.5	35.5	670	14	US-10-014-637-24	Sequence 24, App1
93	1210.0	35.5	673	13	US-10-032-717-40	Sequence 24, App1
94	1209.5	35.5	673	14	US-10-014-637-40	Sequence 40, App1
95	1208.5	35.5	676	15	US-10-006-320-72	Sequence 40, App1
96	1208.5	35.5	674	15	US-10-006-320-82	Sequence 82, App1
97	1208.5	35.5	676	15	US-10-006-320-40	Sequence 40, App1
98	1208.5	35.5	667	13	US-10-006-321-6	Sequence 6, App1
99	1208.5	35.5	667	14	US-10-014-637-6	Sequence 6, App1
100	1208.5	35.5	669	13	US-10-032-717-10	Sequence 10, App1
101	1208.5	35.5	669	13	US-10-032-717-16	Sequence 16, App1
102	1208.5	35.5	669	14	US-10-014-637-10	Sequence 10, App1
103	1208.5	35.5	669	14	US-10-014-637-16	Sequence 16, App1
104	1208.5	35.5	669	15	US-10-006-320-6	Sequence 6, App1
105	1208.5	35.5	669	15	US-10-006-320-12	Sequence 12, App1
106	1208.5	35.5	1206	13	US-10-032-717-2	Sequence 2, App1
107	1208.5	35.5	1206	14	US-10-014-637-2	Sequence 2, App1
108	1208.5	35.5	1206	15	US-10-006-320-2	Sequence 2, App1
109	1207.5	35.5	674	15	US-10-006-320-84	Sequence 50, App1
110	1207.5	35.4	677	15	US-10-006-320-84	Sequence 84, App1
111	1206.6	35.4	673	13	US-10-032-717-12	Sequence 12, App1
112	1206.6	35.4	673	14	US-10-014-637-12	Sequence 12, App1
113	1206.6	35.4	673	15	US-10-006-320-8	Sequence 12, App1
114	1206.6	35.4	673	15	US-10-006-320-70	Sequence 70, App1
115	1206.6	35.4	675	15	US-10-006-320-80	Sequence 80, App1
116	1206.6	35.4	677	15	US-10-006-320-80	Sequence 52, App1
117	1205.5	35.4	674	15	US-10-006-320-76	Sequence 76, App1
118	1205.5	35.4	1157	16	US-10-018-141-16	Sequence 16, App1
119	1205.5	35.4	673	15	US-10-006-320-26	Sequence 26, App1
120	1205.5	35.4	673	15	US-10-006-320-30	Sequence 30, App1
121	1205.5	35.4	673	15	US-10-006-320-34	Sequence 34, App1
122	1205.5	35.4	673	15	US-10-006-320-68	Sequence 68, App1
123	1205.5	35.4	675	15	US-10-006-320-48	Sequence 48, App1
124	1204.4	35.4	674	15	US-10-006-320-44	Sequence 44, App1
125	1204.4	35.3	673	15	US-10-006-320-22	Sequence 22, App1
126	1204.4	35.3	673	15	US-10-006-320-64	Sequence 64, App1
127	1204.4	35.3	673	15	US-10-006-320-66	Sequence 66, App1
128	1202.2	35.3	667	13	US-10-032-717-8	Sequence 8, App1
129	1202.2	35.3	667	14	US-10-014-637-8	Sequence 8, App1
130	1202.2	35.3	673	13	US-10-032-717-18	Sequence 18, App1
131	1202.2	35.3	673	14	US-10-014-637-18	Sequence 18, App1
132	1202.2	35.3	673	15	US-10-006-320-14	Sequence 14, App1
133	1202.2	35.3	675	15	US-10-006-320-78	Sequence 4, App1
134	1202.2	35.3	1210	13	US-10-032-717-4	Sequence 4, App1
135	1202.2	35.3	1210	14	US-10-014-637-4	Sequence 4, App1
136	1202.2	35.3	1210	15	US-10-006-320-20	Sequence 46, App1
137	1201.1	35.3	675	15	US-10-006-320-46	Sequence 92, App1
138	1197.7	35.1	673	15	US-10-006-320-92	Sequence 60, App1
139	1196.7	35.1	673	15	US-10-006-320-60	Sequence 90, App1
140	1187.7	34.9	673	15	US-10-006-320-90	Sequence 58, App1
141	1186.6	34.8	673	15	US-10-006-320-58	Sequence 94, App1
142	1186.6	34.7	673	15	US-10-006-320-94	Sequence 62, App1
143	1182.2	34.7	673	15	US-10-006-320-62	Sequence 88, App1
144	1177.7	34.6	673	15	US-10-006-320-88	Sequence 78, App1
145	1176.7	34.5	673	15	US-10-006-320-56	Sequence 86, App1
146	1176.5	34.2	673	15	US-10-006-320-54	Sequence 54, App1
147	1164.4	34.2	673	15	US-10-099-285-72	Sequence 72, App1
148	1134.4	33.3	1156	14	US-10-028-961-28	Sequence 28, App1
149	1134.4	33.3	1156	15	US-10-066-160A-4	Sequence 4, App1

## ALIGNMENTS

87	1212.5	35.6	670	13	US-10-032-717-44	Sequence 44, App1
88	1212.5	35.6	670	14	US-10-014-637-44	Sequence 44, App1
89	1211.1	35.6	673	13	US-10-032-717-22	Sequence 22, App1
90	1211.1	35.6	673	14	US-10-014-637-22	Sequence 22, App1
91	1210.5	35.5	670	13	US-10-032-717-24	Sequence 24, App1
92	1210.5	35.5	670	14	US-10-014-637-24	Sequence 24, App1
93	1210.0	35.5	673	13	US-10-032-717-40	Sequence 40, App1
94	1209.5	35.5	673	14	US-10-014-637-40	Sequence 40, App1
95	1208.5	35.5	676	15	US-10-006-320-72	Sequence 82, App1
96	1208.5	35.5	674	15	US-10-006-320-82	Sequence 82, App1
97	1208.5	35.5	676	15	US-10-006-320-40	Sequence 40, App1
98	1208.5	35.5	667	13	US-10-006-321-6	Sequence 6, App1
99	1208.5	35.5	667	14	US-10-014-637-6	Sequence 6, App1
100	1208.5	35.5	669	13	US-10-032-717-10	Sequence 10, App1
101	1208.5	35.5	669	13	US-10-032-717-16	Sequence 16, App1
102	1208.5	35.5	669	14	US-10-014-637-10	Sequence 10, App1
103	1208.5	35.5	669	14	US-10-014-637-16	Sequence 16, App1
104	1208.5	35.5	669	15	US-10-006-320-6	Sequence 6, App1
105	1208.5	35.5	669	15	US-10-006-320-12	Sequence 12, App1
106	1208.5	35.5	1206	13	US-10-032-717-2	Sequence 2, App1
107	1208.5	35.5	1206	14	US-10-014-637-2	Sequence 2, App1
108	1208.5	35.5	1206	15	US-10-006-320-2	Sequence 2, App1
109	1207.5	35.5	674	15	US-10-006-320-84	Sequence 50, App1
110	1207.5	35.4	677	15	US-10-006-320-84	Sequence 84, App1
111	1206.6	35.4	673	13	US-10-032-717-12	Sequence 12, App1
112	1206.6	35.4	673	14	US-10-014-637-12	Sequence 12, App1
113	1206.6	35.4	673	15	US-10-006-320-8	Sequence 12, App1
114	1206.6	35.4	673	15	US-10-006-320-70	Sequence 70, App1
115	1206.6	35.4	675	15	US-10-006-320-80	Sequence 80, App1
116	1206.6	35.4	677	15	US-10-006-320-80	Sequence 52, App1
117	1205.5	35.4	674	15	US-10-006-320-76	Sequence 76, App1
118	1205.5	35.4	1157	16	US-10-018-141-16	Sequence 16, App1
119	1205.5	35.4	673	15	US-10-006-320-26	Sequence 26, App1
120	1205.5	35.4	673	15	US-10-006-320-30	Sequence 30, App1
121	1205.5	35.4	673	15	US-10-006-320-34	Sequence 34, App1
122	1205.5	35.4	673	15	US-10-006-320-68	Sequence 68, App1
123	1205.5	35.4	675	15	US-10-006-320-48	Sequence 48, App1
124	1204.4	35.4	674	15	US-10-006-320-44	Sequence 44, App1
125	1204.4	35.3	673	15	US-10-006-320-22	Sequence 22, App1
126	1204.4	35.3	673	15	US-10-006-320-64	Sequence 64, App1
127	1204.4	35.3	673	15	US-10-006-320-66	Sequence 66, App1
128	1202.2	35.3	667	13	US-10-032-717-8	Sequence 8, App1
129	1202.2	35.3	667	14	US-10-014-637-8	Sequence 8, App1
130	1202.2	35.3	673	13	US-10-032-717-18	Sequence 18, App1
131	1202.2	35.3	673	14	US-10-014-637-18	Sequence 18, App1
132	1202.2	35.3	673	15	US-10-006-320-14	Sequence 14, App1
133	1202.2	35.3	675	15	US-10-006-320-78	Sequence 4, App1
134	1202.2	35.3	1210	13	US-10-032-717-4	Sequence 4, App1
135	1202.2	35.3	1210	14	US-10-014-637-4	Sequence 4, App1
136	1202.2	35.3	1210	15	US-10-006-320-20	Sequence 46, App1
137	1201.1	35.3	675	15	US-10-006-320-46	Sequence 92, App1
138	1197.7	35.1	673	15	US-10-006-320-92	Sequence 60, App1
139	1196.7	35.1	673	15	US-10-006-320-60	Sequence 90, App1
140	1187.7	34.9	673	15	US-10-006-320-90	Sequence 58, App1
141	1186.6	34.8	673	15	US-10-006-320-58	Sequence 94, App1
142	1186.6	34.7	673	15	US-10-006-320-94	Sequence 62, App1
143	1182.2	34.7	673	15	US-10-006-320-62	Sequence 88, App1
144	1177.7	34.6	673	15	US-10-006-320-88	Sequence 78, App1
145	1176.7	34.5	673	15	US-10-006-320-56	Sequence 86, App1
146	1176.5	34.2	673	15	US-10-006-320-54	Sequence 54, App1
147	1164.4	34.2	673	15	US-10-099-285-72	Sequence 72, App1
148	1134.4	33.3	1156	14	US-10-028-961-28	Sequence 28, App1
149	1134.4	33.3	1156	15	US-10-066-160A-4	Sequence 4, App1
150	1128.5	33.1	673	15	US-10-066-160A-4	Sequence 33.1

## RESULT 2

US-10-614-076-98  
 ; Sequence 98, Application US-10614076  
 ; Publication No. US20040033543A1

US-10-614-076-98  
 ; Sequence 98, Application US-10614076  
 ; Publication No. US20040033543A1

GENERAL INFORMATION:

; GENERAL INFORMATION:

TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS						
FILE REFERENCE: MECC-218--1 11792.0318.DVUS01						
CURRENT FILING DATE: 2003-07-03						
PRIORITY NUMBER: US/10-614,076						
PRIORITY FILING DATE: 1997-10-27						
PRIORITY NUMBER: 9/427,770						
PRIORITY FILING DATE: 1997-12-18						
NUMBER OF SEQ ID NOS: 113						
SOFTWARE: PatentIn version 3.2						
SEQ ID NO: 98						
LENGTH: 652						
TYPE: PPT						
ORGANISM: <i>Bacillus thuringiensis</i>						
US-10-614-076-98						
Query Match	100.0%	Score 3406;	DB 15;	Length 652;		
Best Local Similarity	100.0%	Pred. No. 5_1e-262;				
Matches 652;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;		
Dy	1	MNPNNRSEHDITKTPNSELOTNHNQYPLADNPNSTEELNKEPLRMTEDSSTEVLDNS	60			
Dy	1	MNPNNRSEHDITKTPNSELOTNHNQYPLADNPNSTEELNKEPLRMTEDSSTEVLDNS	60			
Dy	61	TVKDAVGTSISWQGILGVGVPAGALTSPYQSLNTIWPSDADPKMAQEVLIDK	120			
Dy	61	TVKDAVGTSISWQGILGVGVPAGALTSPYQSLNTIWPSDADPKMAQEVLIDK	120			
Dy	121	KIEEYAKSKAKAELQGLQNFEDVNLNSWKKCPLSLRSKRSQRDIRELTSQASHFRN	180			
Dy	121	KIEEYAKSKAKAELQGLQNFEDVNLNSWKKCPLSLRSKRSQRDIRELTSQASHFRN	180			
Dy	181	SMPSFAVKSEFVLPLPTYQAANTHLLKDAQVGEENGYSSDVAEFYHRLQKLTQQY	240			
Dy	181	SMPSFAVKSEFVLPLPTYQAANTHLLKDAQVGEENGYSSDVAEFYHRLQKLTQQY	240			
Dy	241	TDICVNWYNNVNGLRLGTSYDAWTKFNRPSPREMTLTVLDLIVLPLQYDLSKVKTEL	300			
Dy	241	TDICVNWYNNVNGLRLGTSYDAWTKFNRPSPREMTLTVLDLIVLPLQYDLSKVKTEL	300			
Dy	301	TRDIFTDPFISLNLTLQYEGPFTLSEBSFRKPHLFDYLOGJEFHTRLQPGYFGKDSFNYW	360			
Dy	301	TRDIFTDPFISLNLTLQYEGPFTLSEBSFRKPHLFDYLOGJEFHTRLQPGYFGKDSFNYW	360			
Dy	361	SGNYVETRPSIGSSXTITSFPYGDKSTEPYQKLSDFGOKYRTIANTDVAAPWNGKYLG	420			
Dy	361	SGNYVETRPSIGSSXTITSFPYGDKSTEPYQKLSDFGOKYRTIANTDVAAPWNGKYLG	420			
Dy	421	VTKVDFSQDDQNETSTQYDSDKNGHYSAQSIDQLPETTDEPLEKAYSHQLYNAYE	480			
Dy	421	VTKVDFSQDDQNETSTQYDSDKNGHYSAQSIDQLPETTDEPLEKAYSHQLYNAYE	480			
Dy	481	CFLMQDRRGTEIPEFTWTHRSVDFNTIDAKITQLPVVKAYALSSGASIIEGPGFTGGNL	540			
Dy	481	CFLMQDRRGTEIPEFTWTHRSVDFNTIDAKITQLPVVKAYALSSGASIIEGPGFTGGNL	540			
Dy	541	LFLKESNSIAKFKVTLNSAALLQYRVRIRYASTNLRLFVQNSNDFLVIVYINKTMK	600			
Dy	541	LFLKESNSIAKFKVTLNSAALLQYRVRIRYASTNLRLFVQNSNDFLVIVYINKTMK	600			
Dy	601	DDDLITYQFDLATNSNMGSGDKNELIIGAESFTSNEKYIDKEFIPVQL	652			
Dy	601	DDDLITYQFDLATNSNMGSGDKNELIIGAESFTSNEKYIDKEFIPVQL	652			

Db 601 DDDLTQFDIATTNSMNGSGDKNEELIGAESFVSNEKYIDKLEFIPYQL 652  
DDLTQFDIATTNSMNGSGDKNEELIGAESFVSNEKYIDKLEFIPYQL 652

RESULT 4  
US-10-782-141-11  
; Sequence 11, Application US/10782141  
; GENERAL INFORMATION:  
; APPLICANT: Carozzi, Nadine  
; APPLICANT: Hargiss, Tracy  
; APPLICANT: Koziel, Michael G.  
; APPLICANT: Duck, Nicholas B.  
; APPLICANT: Carr, Brian  
; TITLE OF INVENTION: AXMT-014, A Delta-Endotoxin Gene and  
; TITLE OF INVENTION: Methods for its Use  
; FILE REFERENCE: 045600/274143  
; CURRENT APPLICATION NUMBER: US/10/782,141  
; CURRENT FILING DATE: 2004-02-20  
; PRIOR APPLICATION NUMBER: 60/448,632  
; PRIOR FILING DATE: 2003-02-20  
; NUMBER OF SEQ ID NOS: 23  
; SOFTWARE: FastSEQ for Windows Version 4.0  
; SEQ ID NO: 11  
; LENGTH: 652  
; TYPE: PRT  
; ORGANISM: Bacillus thuringiensis  
US-10-782-141-11

Query Match 100.0%; Score 3406; DB 216; Length 652;  
Best Local Similarity 100.0%; Pred. No. 5.1e-262;  
Matches 652; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 MNPNNRSEHDTIKTPNSELOTNHQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLNDS 60  
Db 1 MNPNNRSEHDTIKTPNSELOTNHQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLNDS 60  
Qy 61 TYKDAVGTG1SUVQQLGUVGVPPAGALTSTYQSFNTIWPDAWVKAQVEVLIDK 120  
Db 61 TYKDAVGTG1SUVQQLGUVGVPPAGALTSTYQSFNTIWPDAWVKAQVEVLIDK 120  
Qy 121 KIEEYAKSKALAELQGLQNNFEDYVNAISWAKTPLSLRSKRSQDRIRELFSQAEHFRN 180  
Db 121 KIEEYAKSKALAELQGLQNNFEDYVNAISWAKTPLSLRSKRSQDRIRELFSQAEHFRN 180  
Qy 181 SNPSFAVSKFEVFLPFIYQAQANTHLLKDKAQVFGEWGISSDEDAEFYRQLKLTQY 240  
Db 181 SNPSFAVSKFEVFLPFIYQAQANTHLLKDKAQVFGEWGISSDEDAEFYRQLKLTQY 240  
Qy 241 TDHCVNWVNVGLNGLRSTDAWKENRFRRMTLTVDLIVLFPFYDIRLYSKGVKTEL 300  
Db 241 TDHCVNWVNVGLNGLRSTDAWKENRFRRMTLTVDLIVLFPFYDIRLYSKGVKTEL 300  
Qy 301 TRDIFTDPISNLTLQEYGPFTSIENSIRKPHLFDYLIQGTFGKDSFNYW 360  
Db 301 TRDIFTDPISNLTLQEYGPFTSIENSIRKPHLFDYLIQGTFGKDSFNYW 360  
Qy 361 SGNVYTRPSIGSSKTTSPFGDKSTEPVQLSFDQKVTARIANTDVAWPNGKVLG 420  
Db 361 SGNVYTRPSIGSSKTTSPFGDKSTEPVQLSFDQKVTARIANTDVAWPNGKVLG 420  
Qy 421 VTKVDFSOYDDQKNETSTQYDSKRNGHVSQDSIDQLPPTTDEPLEKAYSHOLNYAE 480  
Db 421 VTKVDFSOYDDQKNETSTQYDSKRNGHVSQDSIDQLPPTTDEPLEKAYSHOLNYAE 480  
Qy 481 CFLMDQRGTIPPTWHSVPDEFNTDAEKITOLPVKAYAASSGASITGPGFTGGNL 540  
Db 481 CFLMDQRGTIPPTWHSVPDEFNTDAEKITOLPVKAYAASSGASITGPGFTGGNL 540  
Qy 541 LFLIKESSNIAKFVTLNSAALLQYRTRVIRASTINRLFVQNSNNDFLVYINKTMNK 600  
Db 541 LFLIKESSNIAKFVTLNSAALLQYRTRVIRASTINRLFVQNSNNDFLVYINKTMNK 600

Qy 601 DDDLTQFDIATTNSMNGSGDKNEELIGAESFVSNEKYIDKLEFIPYQL 652  
Db 601 DDDLTQFDIATTNSMNGSGDKNEELIGAESFVSNEKYIDKLEFIPYQL 652  
  
RESULT 5  
US-10-614-076-68  
; Sequence 68, Application US/10614076  
; Publication No. US2004003353A1  
; GENERAL INFORMATION:  
; APPLICANT: English, Leigh H.  
; APPLICANT: Brusock, Susan M.  
; APPLICANT: Malver, Thomas M.  
; APPLICANT: Bryson, James W.  
; APPLICANT: Kulezza, Caroline A.  
; APPLICANT: Walters, Frederick S.  
; APPLICANT: Slatin, Stephen L.  
; APPLICANT: Von Tersch, Michael A.  
; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
; CURRENT APPLICATION NUMBER: MBO-218--1 11/792,0218.DV0501  
; FILE REFERENCE: MBO-218--1 11/792,0218.DV0501  
; CURRENT FILING DATE: 2003-07-03  
; PRIOR APPLICATION NUMBER: US/10/614,076  
; PRIOR FILING DATE: 1999-10-27  
; PRIOR APPLICATION NUMBER: 08/993,722  
; PRIOR FILING DATE: 1997-12-18  
; NUMBER OF SEQ ID NOS: 113  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO: 68  
; LENGTH: 652  
; TYPE: PRT  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Recombinant delta endotoxin  
US-10-614-076-68

Query Match 99.9%; Score 3402; DB 15; Length 652;  
Best Local Similarity 99.9%; Pred. No. 1.1e-261;  
Matches 651; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 MNPNNRSEHDTIKTPNSELOTNHQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLNDS 60  
Db 1 MNPNNRSEHDTIKTPNSELOTNHQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLNDS 60  
Qy 61 TVKDAVGTG1SUVQQLGUVGVPPAGALTSTYQSFNTIWPDAWVKAQVEVLIDK 120  
Db 61 TVKDAVGTG1SUVQQLGUVGVPPAGALTSTYQSFNTIWPDAWVKAQVEVLIDK 120  
Qy 121 KIEEYAKSKALAELQGLQNNFEDYVNAISWAKTPLSLRSKRSQDRIRELFSQAEHFRN 180  
Db 121 KIEEYAKSKALAELQGLQNNFEDYVNAISWAKTPLSLRSKRSQDRIRELFSQAEHFRN 180  
Qy 181 SNPSFAVSKFEVFLPFIYQAQANTHLLKDKAQVFGEWGISSDEDAEFYRQLKLTQY 240  
Db 181 SNPSFAVSKFEVFLPFIYQAQANTHLLKDKAQVFGEWGISSDEDAEFYRQLKLTQY 240  
Qy 241 TDHCVNWVNVGLNGLRSTDAWKENRFRRMTLTVDLIVLFPFYDIRLYSKGVKTEL 300  
Db 241 TDHCVNWVNVGLNGLRSTDAWKENRFRRMTLTVDLIVLFPFYDIRLYSKGVKTEL 300  
Qy 301 TRDIFTDPISNLTLQEYGPFTSIENSIRKPHLFDYLIQGTFGKDSFNYW 360  
Db 301 TRDIFTDPISNLTLQEYGPFTSIENSIRKPHLFDYLIQGTFGKDSFNYW 360  
Qy 361 SGNVYTRPSIGSSKTTSPFGDKSTEPVQLSFDQKVTARIANTDVAWPNGKVLG 420  
Db 361 SGNVYTRPSIGSSKTTSPFGDKSTEPVQLSFDQKVTARIANTDVAWPNGKVLG 420  
Qy 421 VTKVDFSOYDDQKNETSTQYDSKRNGHVSQDSIDQLPPTTDEPLEKAYSHOLNYAE 480  
Db 421 VTKVDFSOYDDQKNETSTQYDSKRNGHVSQDSIDQLPPTTDEPLEKAYSHOLNYAE 480  
Qy 481 CFLMDQRGTIPPTWHSVPDEFNTDAEKITOLPVKAYAASSGASITGPGFTGGNL 540  
Db 481 CFLMDQRGTIPPTWHSVPDEFNTDAEKITOLPVKAYAASSGASITGPGFTGGNL 540  
Qy 541 LFLIKESSNIAKFVTLNSAALLQYRTRVIRASTINRLFVQNSNNDFLVYINKTMNK 600  
Db 541 LFLIKESSNIAKFVTLNSAALLQYRTRVIRASTINRLFVQNSNNDFLVYINKTMNK 600  
Qy 481 CFLMDQRGTIPPTWHSVPDEFNTDAEKITOLPVKAYAASSGASITGPGFTGGNL 540



Qy	361	SGNYVETRSPIGSSKTTSPFYGDKSTEPVOKLSPDQKTYRTIANTDVAAPNGKVYLG	420		Db	241	TDHCYNNWYNGLNGRGSYDANTVKFNRFRREMTLTVLDLIVLFPFYDRLYSKGVKTEL	300
Db	361	SGNYVETRSPIGSSKTTSPFYGDKSTEPVOKLSPDQKTYRTIANTDVAAPNGKVYLG	420		Qy	301	TRDIFTDPFISLNLTQEQYGPFTLIESTRKPHLFYDLOGYIEFTRLQGKDFKDSFNW	360
Qy	421	VTKVDFQYDQNETSTQYDTSKRNGHVSQDSDQLPETTDEPLEKAYSHOLNYAE	480		Db	301	TRDIFTDPFISLNLTQEQYGPFTLIESTRKPHLFYDLOGYIEFTRLQGKDFKDSFNW	360
Db	421	VTKVDFQYDQNETSTQYDTSKRNGHVSQDSDQLPETTDEPLEKAYSHOLNYAE	480		Qy	361	SGNYVETRSPIGSSKTTSPFYGDKSTEPVOKLSPDQKTYRTIANTDVAAPNGKVYLG	420
Qy	481	CFLMDQERGTIPFPTWTHRSDFPNTDAEKITQLPVVKAYALSSAIEGPFTGNNL	540		Db	361	SGNYVETRSPIGSSKTTSPFYGDKSTEPVOKLSPDQKTYRTIANTDVAAPNGKVYLG	420
Qy	481	CFLMDQERGTIPFPTWTHRSDFPNTDAEKITQLPVVKAYALSSAIEGPFTGNNL	540		Qy	421	VTKVDFQYDQNETSTQYDTSKRNGHVSQDSDQLPETTDEPLEKAYSHOLNYAE	480
Db	541	LFLKESNSIAFKVTKTNSAQLQYRVRVIRYASTNLRFVQNSNDFLVYIYNTMVK	600		Db	421	VTKVDFQYDQNETSTQYDTSKRNGHVSQDSDQLPETTDEPLEKAYSHOLNYAE	480
Db	541	LFLKESNSIAFKVTKTNSAQLQYRVRVIRYASTNLRFVQNSNDFLVYIYNTMVK	600		Qy	481	CFLMDQERGTIPFPTWTHRSDFPNTDAEKITQLPVVKAYALSSAIEGPFTGNNL	540
Qy	601	DDDLTYQTFLATTNSMGFSKDNEILLIGAESFSVNEKIVYDKEFIPVQL	652		Db	481	CFLMDQERGTIPFPTWTHRSDFPNTDAEKITQLPVVKAYALSSAIEGPFTGNNL	540
Db	601	DDDLTYQTFLATTNSMGFSKDNEILLIGAESFSVNEKIVYDKEFIPVQL	652		Qy	541	LFLKESNSIAFKVTKTNSAQLQYRVRVIRYASTNLRFVQNSNDFLVYIYNTMVK	600
Db	541	LFLKESNSIAFKVTKTNSAQLQYRVRVIRYASTNLRFVQNSNDFLVYIYNTMVK	600		Db	541	LFLKESNSIAFKVTKTNSAQLQYRVRVIRYASTNLRFVQNSNDFLVYIYNTMVK	600
RESULT 8								
US-10-614-076-32								
; Sequence 32, Application US/10614076								
; Publication No. US20040033523A1								
; GENERAL INFORMATION:								
; APPLICANT: English, Leigh H.								
; APPLICANT: Bruscock, Susan M.								
; APPLICANT: Bryson, Thomas M.								
; APPLICANT: Kulesza, Caroline A.								
; APPLICANT: Walters, Frederick S.								
; APPLICANT: Slatin, Stephen L.								
; APPLICANT: Von Tersch, Michael A.								
; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TO COLEOPTERAN INSECTS								
; CURRENT APPLICATION NUMBER: US20040033523A1								
; FILE REFERENCE: MECO-218--1 11792.0218. DUVUS01								
; CURRENT FILING DATE: 2003-07-03								
; PRIOR FILING DATE: 1999-10-27								
; PRIOR APPLICATION NUMBER: 08/993,722								
; NUMBER OF SEQ ID NOS: 113								
; SOFTWARE: PatentIn version 3.2								
; SEQ ID NO: 32								
; LENGTH: 652								
; TYPE: PRT								
; ORGANISM: Artificial sequence								
; FEATURE: Recombinant delta endotoxin								
; OTHER INFORMATION: Recombinant delta endotoxin								
US-10-614-076-32								
; Query Match Score 99.8%; Best Local Similarity 99.8%; Matches 651; Conservative 0; Mismatches 1; Indels 0; Gaps 0;								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
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; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
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; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								
; SEQ ID NO: 48								
; LENGTH: 652; TYPE: PRT; ORGANISM: Artificial sequence; FEATURE: Recombinant delta endotoxin								

Db	121 KIEEYAKSKALAELQGLQNNFEDYYNALLSWKKTPLSLRSKRSQDRIRLFSQAEHPPN	180	Qy	61 TVKDAVGTCISWVQQLGTVGVPPAGALTSFYQSFNLTWPSDADPKAFMAQVEVLIDK	120
Qy	181 SMPSFAVSKFEEVLFLPTYAQDANTHLLKDAOVFGEENGYSSEDVAEFPYHROLKLTOQY	240	Db	61 TVKDAVGTCISWVQQLGTVGVPPAGALTSFYQSFNLTWPSDADPKAFMAQVEVLIDK	120
Db	181 SMPSFAVSKFEEVLFLPTYAQDANTHLLKDAOVFGEENGYSSEDVAEFPYHROLKLTOQY	240	Qy	121 KIEEYAKSKALAELQGLNNFEDYYNALLSWKKTPLSLRSKRSQDRIRLFSQAEHPPN	180
Qy	241 TDHCYNNWYNGLNGLRGSTYDAWKFNFRREMILTVLILIVLFPFYDRLYSKGVKCPL	300	Db	121 KIEEYAKSKALAELQGLNNFEDYYNALLSWKKTPLSLRSKRSQDRIRLFSQAEHPPN	180
Db	241 TDHCYNNWYNGLNGLRGSTYDAWKFNFRREMILTVLILIVLFPFYDRLYSKGVKCPL	300	Qy	181 SMPSFAVSKFEEVLFLPTYAQDANTHLLKDAQVGEENGYSSEDVAEFPYHROLKLTOQY	240
Qy	301 TRDIFTDPISLNTLQEQYGPFTLSEIENSRKPHFLDYLQGFGKDSFNTW	360	Db	181 SMPSFAVSKFEEVLFLPTYAQDANTHLLKDAQVGEENGYSSEDVAEFPYHROLKLTOQY	240
Db	301 TRDIFTDPISLNTLQEQYGPFTLSEIENSRKPHFLDYLQGFGKDSFNTW	360	Qy	241 TDHCVNWVNGLNGLRGSTYDANVFNFRRENTLTVLDLIVLFPFYDRLYSKGVKCPL	300
Qy	361 SGNYVETRPIGSSKTTISPSYGDKESTEVPQKLSPFGKTYRANTDAWPNKGKYLG	420	Db	241 TDHCVNWVNGLNGLRGSTYDANVFNFRRENTLTVLDLIVLFPFYDRLYSKGVKCPL	300
Db	361 SGNYVETRPIGSSKTTISPSYGDKESTEVPQKLSPFGKTYRANTDAWPNKGKYLG	420	Qy	301 TRDIFTDPISLNTLQEQYGPFTLSEIENS TRKPHFLDYLQGIEFHTRLQPGYFGKDSFNYW	360
Qy	421 VTKVDFSQYDDQNETSTQYDTSKRNNNGHVAQDSDIDQLPETTDEPLEKAYSHQLYNAE	480	Db	301 TRDIFTDPISLNTLQEQYGPFTLSEIENS TRKPHFLDYLQGIEFHTRLQPGYFGKDSFNYW	360
Db	421 VTKVDFSQYDDQNETSTQYDTSKRNNNGHVAQDSDIDQLPETTDEPLEKAYSHQLYNAE	480	Qy	361 SGNYVETRPIGSSKTTISPSYGDKESTEVPQKLSPDGKTYRANTDAWPNKGKYLG	420
Qy	481 CFLMDQRRTGTPFPTWHSVDFNTIDEKITOLPVVYKAYALSGASATIEGPGFTGPNL	540	Db	361 SGNYVETRPIGSSKTTISPSYGDKESTEVPQKLSPDGKTYRANTDAWPNKGKYLG	420
Db	481 CFLMDQRRTGTPFPTWHSVDFNTIDEKITOLPVVYKAYALSGASATIEGPGFTGPNL	540	Qy	421 VTKVDFSQYDDQNETSTQYDTSKRNNNGHVAQDSDIDQLPETTDEPLEKAYSHQLYNAE	480
Qy	541 LFLKESSNSIAKFKVTLNSALLORYVRIRYASTTNLRLFVQNSNNDLFLVYINKTMNK	600	Db	421 VTKVDFSQYDDQNETSTQYDTSKRNNNGHVAQDSDIDQLPETTDEPLEKAYSHQLYNAE	480
Db	541 LFLKESSNSIAKFKVTLNSALLORYVRIRYASTTNLRLFVQNSNNDLFLVYINKTMNK	600	Qy	481 CFLMDQRRTGTPFPTWHSVDFNTIDEKITOLPVVYKAYALSGASATIEGPGFTGPNL	540
Qy	601 DDDLTYQTFDLATTSNMGSGDKNELLIGAESFSVSNKCIYIDKIEFIPVQL	652	Db	481 CFLMDQRRTGTPFPTWHSVDFNTIDEKITOLPVVYKAYALSGASATIEGPGFTGPNL	540
Db	601 DDDLTYQTFDLATTSNMGSGDKNELLIGAESFSVSNKCIYIDKIEFIPVQL	652	Qy	541 LFLKESSNSIAKFKVTLNSALLORYVRIRYASTTNLRLFVQNSNNDLFLVYINKTMNK	600
Qy	601 DDDLTYQTFDLATTSNMGSGDKNELLIGAESFSVSNKCIYIDKIEFIPVQL	652	Db	541 LFLKESSNSIAKFKVTLNSALLORYVRIRYASTTNLRLFVQNSNNDLFLVYINKTMNK	600
RESULT 10					
US-10-614-076-44					
Sequence 44, Application US/10614076					
Publication No. US20040033523A1					
GENERAL INFORMATION:					
APPLICANT: English, Leigh H.					
APPLICANT: Brussock, Susan M.					
APPLICANT: Bryson, James W.					
APPLICANT: Kulesza, Caroline A.					
APPLICANT: Walters, Frederick S.					
APPLICANT: Slatkin, Stephen L.					
APPLICANT: Von Tersch, Michael A.					
TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TO COLEOPTERAN INSECTS					
FILE REFERENCE: MECO-218-1 11792-0218.DVUS01					
CURRENT APPLICATION NUMBER: US/10/614,076					
CURRENT FILING DATE: 2003-07-03					
PRIOR APPLICATION NUMBER: 09/427,770					
PRIOR FILING DATE: 1999-10-27					
PRIOR APPLICATION NUMBER: 08/993,722					
PRIOR FILING DATE: 1997-12-18					
NUMBER OF SEQ ID NOS: 113					
SOFTWARE: PatentIn version 3.2					
SEQ ID NO: 44					
LENGTH: 652					
TYPE: PRT					
ORGANISM: Artificial sequence					
FEATURE: OTHER INFORMATION: Recombinant delta endotoxin					
US-10-614-076-44					
Query Match Score 3399; DB 15; Length 652;					
Best Local Similarity 99.8%; Pred. No. 1.8e-26; Mismatches 1; Indels 0; Gaps 0;					
Matches 651; Conservative 0; SEQ ID NO: 54					
LENGTH: 652					
TYPE: PRT					
ORGANISM: Artificial sequence					
FEATURE: OTHER INFORMATION: Recombinant delta endotoxin					
US-10-614-076-54					
LENGTH: 652					
TYPE: PRT					
ORGANISM: Artificial sequence					
FEATURE: OTHER INFORMATION: Recombinant delta endotoxin					
US-10-614-076-54					
OTHER INFORMATION: Recombinant delta endotoxin					
US-10-614-076-54					
OTHER INFORMATION: Recombinant delta endotoxin					
US-10-614-076-54					
OTHER INFORMATION: Recombinant delta endotoxin					
US-10-614-076-54					

Query Match Similarity 99.8%; Score 3399; DB 15; Length 652;  
 Best Local Similarity 99.8%; Pred. No. 1.8e-261;  
 Matches 651; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 LENGTH: 652  
 TYPE: PRT  
 ORGANISM: Artificial sequence  
 FEATURE:  
 OTHER INFORMATION: Recombinant delta endotoxin  
 US-10-614-076-8

Query Match Similarity 99.8%; Score 3398; DB 15; Length 652;  
 Best Local Similarity 99.8%; Pred. No. 2.2e-261;  
 Matches 651; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 LENGTH: 652  
 TYPE: PRT  
 ORGANISM: Artificial sequence  
 FEATURE:  
 OTHER INFORMATION: Recombinant delta endotoxin  
 US-10-614-076-8

Query 1 MNPNRSEHDIIKTVTPNSELQTNHNOYPLADNPNSTLEELNYKEFLRMTDSSTEVLDNS 60  
 Db 1 MNPNRSEHDIIKTVTPNSELQTNHNOYPLADNPNSTLEELNYKEFLRMTDSSTEVLDNS 60  
 Query 61 TVKDAUTGTSVQGQILGVGVPAGALTSEYQSTINTIWPSDADPKMAQEVLINK 120  
 Db 61 TVKDAUTGTSVQGQILGVGVPAGALTSEYQSTINTIWPSDADPKMAQEVLINK 120  
 Query 121 KIEEYAKSKAALQALGQIQLNPFEDYNAIANSKKTPISLRSKRSQDRIEFSQASHFRN 180  
 Db 121 KIEEYAKSKAALQALGQIQLNPFEDYNAIANSKKTPISLRSKRSQDRIEFSQASHFRN 180  
 Db 121 KIEEYAKSKAALQALGQIQLNPFEDYNAIANSKKTPISLRSKRSQDRIEFSQASHFRN 180  
 Query 181 SMPSFAVKFPEVFLFLPITYQAANTHLLLKDAAQVGEENGYSSVEDAEIFHRLKLTOOY 240  
 Db 181 SMPSFAVKFPEVFLFLPITYQAANTHLLLKDAAQVGEENGYSSVEDAEIFHRLKLTOOY 240  
 Db 181 SMPSFAVKFPEVFLFLPITYQAANTHLLLKDAAQVGEENGYSSVEDAEIFHRLKLTOOY 240  
 Query 241 TDHCNWNWYNGNGLPGSTYDAAWKNRFRPEMTLTVLDLFLPITYSKCVKTEL 300  
 Db 241 TDHCNWNWYNGNGLPGSTYDAAWKNRFRPEMTLTVLDLFLPITYSKCVKTEL 300  
 Query 301 TRDIFTDPISLNTLQEYGPFLSISNSIRKPHFLPYLOGIEFHTRLQGPYFGKDSFNTW 360  
 Db 301 TRDIFTDPISLNTLQEYGPFLSISNSIRKPHFLPYLOGIEFHTRLQGPYFGKDSFNTW 360  
 Query 361 SGNYVETRSPSIGSSKTTISTPPYGDKSTEVPYKQYRTIANTDVAAPNGKVYLG 420  
 Db 361 SGNYVETRSPSIGSSKTTISTPPYGDKSTEVPYKQYRTIANTDVAAPNGKVYLG 420  
 Query 421 VTKVDFSQYDQDKNETSTQYDSKRNGHVAQDSIDOLPBPETTDEPLEKAYSHOLNAYE 480  
 Db 421 VTKVDFSQYDQDKNETSTQYDSKRNGHVAQDSIDOLPBPETTDEPLEKAYSHOLNAYE 480  
 Query 481 CPMQDRGTTIPFETWTHSYDFENTIDAEKITOLPYKVALSSASIELEGPGFTGGNU 540  
 Db 481 CPMQDRGTTIPFETWTHSYDFENTIDAEKITOLPYKVALSSASIELEGPGFTGGNU 540  
 Query 541 LFLKESSNSIAKFVTLNSAALLQYRVRVYASTNLRLFVQNSNNDFLYINKTMNK 600  
 Db 541 LFLKESSNSIAKFVTLNSAALLQYRVRVYASTNLRLFVQNSNNDFLYINKTMNK 600  
 Query 601 DDDLYTQFDLATTNSNMGSGDKNELLIGAESFSNEKIKYDKEFIPYQOL 652  
 Db 601 DDDLYTQFDLATTNSNMGSGDKNELLIGAESFSNEKIKYDKEFIPYQOL 652  
 RESULT 12  
 US-10-614-076-8  
 Sequence 8, Application US/10614076  
 Publication No. US/004003352A1  
 GENERAL INFORMATION:  
 APPLICANT: Bruscock, Susan M.  
 APPLICANT: English, Leigh H.  
 APPLICANT: Malvar, Thomas M.  
 APPLICANT: Bryson, James W.  
 APPLICANT: Kulesza, Caroline A.  
 APPLICANT: Walters, Frederick S.  
 APPLICANT: Slatin, Stephen L.  
 APPLICANT: Von Tersch, Michael A.  
 TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 FILE REFERENCE: MECO:218--1 11792.0218.DVUS01  
 CURRENT FILING DATE: 2003-07-03  
 PRIORITY APPLICATION NUMBER: US/10/614,076  
 PRIORITY FILING DATE: 1999-10-27  
 PRIORITY APPLICATION NUMBER: 09/427,770  
 PRIORITY FILING DATE: 1997-12-18  
 NUMBER OF SEQ ID NOS: 113  
 SOFTWARE: Patentin version 3.2  
 SEQ ID NO 8

RESULT 13  
 US-10-614-076-26  
 Sequence 26, Application US/10614076  
 Publication No. US/004003352A1  
 GENERAL INFORMATION:  
 APPLICANT: English, Leigh H.  
 APPLICANT: Bruscock, Susan M.  
 APPLICANT: Malvar, Thomas M.  
 APPLICANT: Bryson, James W.  
 APPLICANT: Kulesza, Caroline A.  
 APPLICANT: Walters, Frederick S.  
 APPLICANT: Slatin, Stephen L.  
 APPLICANT: Von Tersch, Michael A.  
 TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 FILE REFERENCE: MECO:218--1 11792.0218.DVUS01  
 CURRENT FILING DATE: 2003-07-03  
 PRIORITY APPLICATION NUMBER: 09/427,770  
 PRIORITY FILING DATE: 1999-10-27  
 PRIORITY APPLICATION NUMBER: US/10/614,076  
 CURRENT APPLICATION NUMBER: US/10/614,076  
 CURRENT FILING DATE: 2003-07-03

PRIOR APPLICATION NUMBER: 09/427,770  
 PRIOR FILING DATE: 1999-10-27  
 PRIOR APPLICATION NUMBER: 08/993,722  
 PRIOR FILING DATE: 1997-12-18  
 SEQ ID NUMBER: 113  
 SOFTWARE: PatentIn Version 3.2  
 SEQ ID NO: 26  
 LENGTH: 652  
 TYPE: PRT  
 ORGANISM: Artificial sequence  
 FEATURE:  
 OTHER INFORMATION: Recombinant delta endotoxin  
 US-10-614-076-26

Query Match 99.8%; Score 3398; DB 15; Length 652;  
 Best Local Similarity 99.7%; Pred. No. 2.2e-261; Indels 1; Gaps 0;  
 Matches 650; Conservative 1; Mismatches 1;

Qy 1 MNPNRNRSEHDITKTPNSELQTQNENQYPLADNPNSTLRELYKEFLRMTEDSSTEVLIDNS 60  
 Db 1 MNPNRNRSEHDITKTPNSELQTQNENQYPLADNPNSTLRELYKEFLRMTEDSSTEVLIDNS 60

Qy 61 TVDAVGTVGIVQIQLGVPPAGALTSPYQOSFLNTIWPSPDWAQAEVLIDK 120  
 Db 61 TVDAVGTVGIVQIQLGVPPAGALTSPYQOSFLNTIWPSPDWAQAEVLIDK 120

Qy 121 KIEEYAKSKALAEQGLQNONFEDVNAIWSWKCTPLSLRSKRSQDRTRLEFSQAESHERN 180  
 Db 121 KIEEYAKSKALAEQGLQNONFEDVNAIWSWKCTPLSLRSKRSQDRTRLEFSQAESHERN 180

Qy 181 SMPSFAVSKPFEVLPFLPTYQAQANTHLLIKDQAQVGEEMGYSSEDVAFYHROKLTKQY 240  
 Db 181 SMPSFAVSKPFEVLPFLPTYQAQANTHLLIKDQAQVGEEMGYSSEDVAFYHROKLTKQY 240

Qy 241 TDHCVNWVNGLNGRLGSTYDAWKFNFRREMTLTVLLIVLFPFYDIRLYSKGVKTEL 300  
 Db 241 TDHCVNWVNGLNGRLGSTYDAWKFNFRREMTLTVLLIVLFPFYDIRLYSKGVKTEL 300

Qy 301 TRDIFTDPFLSLNLTLQEGPFTLSEINSIRKPHLFDFYDQIGIEFHTRLQPGYFGKDSFNYW 360  
 Db 301 TRDIFTDPFLSLNLTLQEGPFTLSEINSIRKPHLFDFYDQIGIEFHTRLQPGYFGKDSFNYW 360

Qy 361 SGNYVETRSPSIGSSKTTSPYGDKSTEVQKLSFDGQYVTRIANTDAWPNKGKYLG 420  
 Db 361 SGNYVETRSPSIGSSKTTSPYGDKSTEVQKLSFDGQYVTRIANTDAWPNKGKYLG 420

Qy 421 VTKVDFSQYDDQNETSTQYDCKRNNNGHVSQDSDQDQNETTDEPLEKAYSHQLYNAE 480  
 Db 421 VTKVDFSQYDDQNETSTQYDCKRNNNGHVSQDSDQDQNETTDEPLEKAYSHQLYNAE 480

Qy 481 CFLMQDRRTIPFFTWHSVDFFNTIDAEKLTQPLVYKAYALSGASIEGPGFTGQNL 540  
 Db 481 CFLMQDRRTIPFFTWHSVDFFNTIDAEKLTQPLVYKAYALSGASIEGPGFTGQNL 540

Qy 541 LFLKESSNSIAKPKVTLNSAALQYRYIRYASTTNRFLVNSNNDFLYYINKTMNK 600  
 Db 541 LFLKESSNSIAKPKVTLNSAALQYRYIRYASTTNRFLVNSNNDFLYYINKTMNK 600

Qy 601 DDDLTYQTFDLATTNMNGFSGDKNELIIGAESFVSNEKIVIDKIEFIPVQL 652  
 Db 601 DDDLTYQTFDLATTNMNGFSGDKNELIIGAESFVSNEKIVIDKIEFIPVQL 652

RESULT 14  
 US-10-614-076-42  
 Sequence 42, Application US/10614076  
 Publication No. US20040033523A1  
 GENERAL INFORMATION:  
 APPLICANT: English, Leigh H.  
 APPLICANT: Bruscock, Susan M.  
 APPLICANT: Malvar, Thomas M.  
 APPLICANT: Bryson, James W.  
 APPLICANT: Kulesza, Caroline A.

RESULT 15  
 US-10-614-076-12  
 Sequence 12, Application US/10614076



Db 481 CFLMDQRRTGIPPFWTHRSVDFPNTIDAEKITQLPVVAKAYLSSGAS1IEPGCFTGGNL 540 Qy 541 LFLKESSNSIAKFKVTLNSAALLORYRVRIRYASTTNLFLVQNSNNDFLVYINKTMNK 600 Db 541 LFLKESSNSIAKFKVTLNSAALLORYRVRIRYASTTNLFLVQNSNNDFLVYINKTMNK 600 Qy 601 DDDITYQTFDLATTNMGSFSDKNEELIGAESVSNEKIIDKIEF1FVQL 652 Db 601 DDDITYQTFDLATTNMGSFSDKNEELIGAESVSNEKIIDKIEF1FVQL 652

RESULT 17  
US-10-614-076-10  
; Sequence 10, Application US/10614076  
; Publication No. US20040033523A1

GENERAL INFORMATION:  
; APPLICANT: English, Leigh H.  
; APPLICANT: Brussock, Susan M.  
; APPLICANT: Malyar, Thomas M.  
; APPLICANT: Bryson, James W.  
; APPLICANT: Kulesza, Caroline A.  
; APPLICANT: Slatin, Stephen L.  
; APPLICANT: Walters, Frederick S.  
; APPLICANT: Von Tersch, Michael A.  
; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TO COLEOPTERAN INSECTS  
; FILE REFERENCE: MECCO-218--1 11792.0218.DVUS01  
; CURRENT APPLICATION NUMBER: US/10/614,076  
; CURRENT FILING DATE: 2003-07-03  
; PRIOR APPLICATION NUMBER: 09/427,770  
; PRIOR FILING DATE: 1999-10-27  
; PRIOR APPLICATION NUMBER: 08/993,722  
; PRIOR FILING DATE: 1997-12-18  
; NUMBER OF SEQ ID NOS: 113  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO: 10  
; LENGTH: 652  
; TYPE: PRT  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Recombinant delta endotoxin  
; US-10-614-076-10

Query Match 99.7%; Score 3395; DB 15; Length 652;  
Best Local Similarity 99.7%; Pred. No. 3.8e-261;  
Matches 650; Conservative 2; Mismatches 0; Indels 0; Gaps 0;  
; OTHER INFORMATION: Recombinant delta endotoxin  
; US-10-614-076-34

Db 1 MNPNRSEHDITKVPNSLQTNHQPLADNPNSTLLELNKREFLRTEDSSTEVLDS 60  
Db 1 MNPNRSEHDITKVPNSLQTNHQPLADNPNSTLLELNKREFLRTEDSSTEVLDS 60  
Qy 61 TVKDAVGIGSIVQGILGVGVPPFAGALTFSYQSFNLTWPSADPWAQEVILDK 120  
Db 61 TVKDAVGIGSIVQGILGVGVPPFAGALTFSYQSFNLTWPSADPWAQEVILDK 120  
Qy 121 KIEEYAKSKAKAELQGLQNNFEDYNA1NSWKCTPLSLRSKSDRIBLFQAESHRN 180  
Db 121 KIEEYAKSKAKAELQGLQNNFEDYNA1NSWKCTPLSLRSKSDRIBLFQAESHRN 180  
Qy 181 SMPSFAVSKPEVLFPLPTYQAQANTHLLKDAQFGEENGYSSDVAEYHQLK1TQY 240  
Db 181 SMPSFAVSKPEVLFPLPTYQAQANTHLLKDAQFGEENGYSSDVAEYHQLK1TQY 240  
Qy 241 TDHCVNWVNGLNGLRSYDAWYKFNRPREMTLTVLLIVFPLPFYDRLYSGKVTEL 300  
Db 241 SDHCVNWVNGLNGLRSYDAWYKFNRPREMTLTVLLIVFPLPFYDRLYSGKVTEL 300  
Qy 301 TRDIFTDP1FSLNLTQEQPTFELSIENSRKPHFDLYQGIEFHTRLOGYFGKDSFNYW 360  
Db 301 TRDIFTDP1FSLNLTQEQPTFELSIENSRKPHFDLYQGIEFHTRLOGYFGKDSFNYW 360  
Qy 361 SGNYVETRSPIGSSKTTSPYGDKSTEPVQKLSFDGQKVYRTANTDAAWNGKVYLG 420  
Db 361 SGNYVETRSPIGSSKTTSPYGDKSTEPVQKLSFDGQKVYRTANTDAAWNGKVYLG 420

Db 421 VTKVDFSOYDQKNETSTOTYDLSKRNNGHVSAQDSIDQLPETTDEPLEKAYSHQLNAYE 480  
Db 421 VTKVDFSOYDQKNETSTOTYDLSKRNNGHVSAQDSIDQLPETTDEPLEKAYSHQLNAYE 480  
Qy 481 CFLMDQRRTGIPPFWTHRSVDPNTIDAEKITOLPVVAKAYLSSGAS1IEPGCFTGGNL 540  
Db 481 CFLMDQRRTGIPPFWTHRSVDPNTIDAEKITOLPVVAKAYLSSGAS1IEPGCFTGGNL 540  
Qy 541 LFLKESSNSIAKFKVTLNSAALLQYRVRIRYASTTNLFLVQNSNNDFLVYINKTMNK 600  
Db 541 LFLKESSNSIAKFKVTLNSAALLQYRVRIRYASTTNLFLVQNSNNDFLVYINKTMNK 600  
Qy 601 DDDITYQFDLATTNMGSFSDKNEELIGAESVSNEKIIDKIEF1FVQL 652  
Db 601 DDDITYQFDLATTNMGSFSDKNEELIGAESVSNEKIIDKIEF1FVQL 652  
Qy 601 DDDITYQFDLATTNMGSFSDKNEELIGAESVSNEKIIDKIEF1FVQL 652  
Db 601 DDDITYQFDLATTNMGSFSDKNEELIGAESVSNEKIIDKIEF1FVQL 652

RESULT 18  
US-10-614-076-34  
; Sequence 34, Application US/10614076  
; Publication No. US20040033523A1  
; GENERAL INFORMATION:  
; APPLICANT: English, Leigh H.  
; APPLICANT: Brussock, Susan M.  
; APPLICANT: Malyar, Thomas M.  
; APPLICANT: Bryson, James W.  
; APPLICANT: Kulesza, Caroline A.  
; APPLICANT: Walters, Frederick S.  
; APPLICANT: Slatin, Stephen L.  
; APPLICANT: Von Tersch, Michael A.  
; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TO COLEOPTERAN INSECTS  
; FILE REFERENCE: MECCO-218--1 11792.0218.DVUS01  
; CURRENT APPLICATION NUMBER: US/10/614,076  
; CURRENT FILING DATE: 2003-07-03  
; PRIOR APPLICATION NUMBER: 09/427,770  
; PRIOR FILING DATE: 1999-10-27  
; PRIOR APPLICATION NUMBER: 08/993,722  
; PRIOR FILING DATE: 1997-12-18  
; NUMBER OF SEQ ID NOS: 113  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO: 34  
; LENGTH: 652  
; TYPE: PRT  
; ORGANISM: Artificial sequence  
; OTHER INFORMATION: Recombinant delta endotoxin  
; US-10-614-076-34

Query Match 99.7%; Score 3395; DB 15; Length 652;  
Best Local Similarity 99.7%; Prod. No. 3.8e-261;  
Matches 650; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
; OTHER INFORMATION: Recombinant delta endotoxin  
; US-10-614-076-34

Db 1 MNPNRSEHDITKVPNSLQTNHQPLADNPNSTLLELNKREFLRTEDSSTEVLDS 60  
Db 1 MNPNRSEHDITKVPNSLQTNHQPLADNPNSTLLELNKREFLRTEDSSTEVLDS 60  
Qy 61 TVKDAVGIGSIVQGILGVGVPPFAGALTFSYQSFNLTWPSADPWAQEVILDK 120  
Db 61 TVKDAVGIGSIVQGILGVGVPPFAGALTFSYQSFNLTWPSADPWAQEVILDK 120  
Qy 121 KIEEYAKSKAKAELQGLQNNFEDYNA1NSWKCTPLSLRSKSDRIBLFQAESHRN 180  
Db 121 KIEEYAKSKAKAELQGLQNNFEDYNA1NSWKCTPLSLRSKSDRIBLFQAESHRN 180  
Qy 181 SMPSFAVSKPEVLFPLPTYQAQANTHLLKDAQFGEENGYSSDVAEYHQLK1TQY 240  
Db 181 SMPSFAVSKPEVLFPLPTYQAQANTHLLKDAQFGEENGYSSDVAEYHQLK1TQY 240  
Qy 241 TDHCVNWVNGLNGLRSYDAWYKFNRPREMTLTVLLIVFPLPFYDRLYSGKVTEL 300  
Db 241 TDHCVNWVNGLNGLRSYDAWYKFNRPREMTLTVLLIVFPLPFYDRLYSGKVTEL 300  
Qy 301 TRDIFTDP1FSLNLTQEQPTFELSIENSRKPHFDLYQGIEFHTRLOGYFGKDSFNYW 360  
Db 301 TRDIFTDP1FSLNLTQEQPTFELSIENSRKPHFDLYQGIEFHTRLOGYFGKDSFNYW 360  
Qy 361 SGNYVETRSPIGSSKTTSPYGDKSTEPVQKLSFDGQKVYRTANTDAAWNGKVYLG 420  
Db 361 SGNYVETRSPIGSSKTTSPYGDKSTEPVQKLSFDGQKVYRTANTDAAWNGKVYLG 420





OTHER INFORMATION: Recombinant delta endotoxin							
FEATURE:	Query	Match	Score	DB	Length	DB	Length
US-10-614-076-30							
Best Local Similarity	Query	99 %	3392;	DB 15;	Length 652;		
Matches 650;	Best Local Similarity	99.7 %;	Precl. No. 6	6-e-261;			
Matches 650;	Conservative	0;	Mismatches	2;	Indels	0;	Gaps
	1	MNNPNRSEHDTIKTPNSELQTNINQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDS	60				
	1	MNNPNRSEHDTIKTPNSELQTNINQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDS	60				
Qy	61	TVKDAVGTG1SUVQQLIGVGVPFAGALTSPYQSFINTWPSADPWKAFMAQEVBLDK	120				
Db	61	TVKDAVGTG1SUVQQLIGVGVPFAGALTSPYQSFINTWPSADPWKAFMAQEVBLDK	120				
Qy	121	KIEEYAKSKAELQGQNNFEDYTNALNSWKKTP1PLSRKRSQDRIRELFSQAEHFRN	184				
Db	121	KIEEYAKSKAELQGQNNFEDYTNALNSWKKTP1PLSRKRSQDRIRELFSQAEHFRN	184				
Qy	181	SMPSPAVSKFEVLFPLTYAQANTHLLKDAQVFCBEGWGSSEDVAEFYHQLKLTOQY	244				
Db	181	SMPSPAVSKFEVLFPLTYAQANTHLLKDAQVFCBEGWGSSEDVAEFYHQLKLTOQY	244				
Qy	241	TDHCVWVNVNGLNGRGSTYDAWKPNRFRREMTLTVLDLIVLFPYDRLYSSCVKTEL	300				
Db	241	TDHCVWVNVNGLNGRGSTYDAWKPNRFRREMTLTVLDLIVLFPYDRLYSSCVKTEL	300				
Qy	301	TRDIEFDPIFLNTLQBEYGPFLSIENSIRKPHLFDPYLOGIEBFHTRLQPGYFGKDSFNYW	366				
Db	301	TRDIEFDPIFLNTLQBEYGPFLSIENSIRKPHLFDPYLOGIEBFHTRLQPGYFGKDSFNYW	366				
Qy	361	SGNYVETRPSIGSKITSPYGDKSTEVPQKLSPDQKQYRTIANTDVAAPNGKVKYLG	424				
Db	361	SGNYVETRPSIGSKITSPYGDKSTEVPQKLSPDQKQYRTIANTDVAAPNGKVKYLG	424				
Qy	421	VTKVDFQYDDQKNETSTQYDTSKRNGHVSQAQSD1DQLPPTETDPLEKAYSHQLNAYE	484				
Db	421	VTKVDFQYDDQKNETSTQYDTSKRNGHVSQAQSD1DQLPPTETDPLEKAYSHQLNAYE	484				
Qy	481	CFIMQDRGRTIPFPTWTHRSVDFTNDAEKITQLPVVKAYALSSASITIEGPGFGGNL	544				
Db	481	CFIMQDRGRTIPFPTWTHRSVDFTNDAEKITQLPVVKAYALSSASITIEGPGFGGNL	544				
Qy	541	LFLKESSNSIAKEFKVTLNSAALLQRYVRVIRYASTTMLRFLVQNSNNDFLVYINKTMNK	601				
Db	541	LFLKESSNSIAKEFKVTLNSAALLQRYVRVIRYASTTMLRFLVQNSNNDFLVYINKTMNK	601				
Qy	601	DDDLTYQPFDLATNTNSANGFSGDKNELLIGAESFSNEKIVYDKIEKIPIVQL	652				
Db	601	DDDLTYQPFDLATNTNSANGFSGDKNELLIGAESFSNEKIVYDKIEKIPIVQL	652				

PRIOR FILING DATE:	1997-12-18
NUMBER OF SEQ ID NOS:	113
SOFTWARE:	Patentin version 3.2
SEQ ID NO:	60
LENGTH:	652
TYPE:	PRT
ORGANISM:	Artificial sequence
FEATURE:	OTHER INFORMATION: Recombinant delta endotoxin
US-10-614-076-60	
Query Match	99 %; Score 3392; DB 15; Length 652;
Best Local Similarity	99 %; Pred. No. 6.7e-261;
Matches	2; Mismatches 1; Indels 0; Gaps 0;
Qy	1 MNPNRSEHDITKVTNPSENQTNRQYPLADNPNTSLEELNAYKEFLRMTEDSSTEVLNDS 60
Db	1 MNPNRSEHDITKVTNPSENQTNRQYPLADNPNTSLEELNAYKEFLRMTEDSSTEVLNDS 60
Qy	61 TVKDAVGTG1SVVGQTLGVGVPFFAGLTSFYQSFNTIWPSPDADPKAFMAQVBYLIDK 120
Db	61 TVKDAVGTG1SVVGQTLGVGVPFFAGLTSFYQSFNTIWPSPDADPKAFMAQVBYLIDK 120
Qy	121 KIEEYAKSKAELQQLQNNFEDYTNALASWKKTFLPLSLSKRSQRIRLFLSQEASHFPRN 180
Db	121 KIEEYAKSKAELQQLQNNFEDYTNALASWKKTFLPLSLSKRSQRIRLFLSQEASHFPRN 180
Qy	181 SMPSFAVSKFEVLFPLTYAQANTHILLLKDQYGEENYSSDVAEYHQLKLTQY 240
Db	181 SMPSFAVSKFEVLFPLTYAQANTHILLLKDQYGEENYSSDVAEYHQLKLTQY 240
Qy	241 TDHCVNWVNGNLNGRGSTYDAWVKPNSRPREMTLTVLDLIVLFPFYDIRLYSKGVKTBL 300
Db	241 TDHCVNWVNGNLNGRGSTYDAWVKPNSRPREMTLTVLDLIVLFPFYDIRLYSKGVKTBL 300
Qy	301 TRDIFTDPISFTNLTOBYGPTFLSENSIRKPHLFDYLOQIEFHTPLQGYFGKDSFNW 360
Db	301 TRDIFTDPISFTNLTOBYGPTFLSENSIRKPHLFDYLGIEFHTPLQGYFGKDSFNW 360
Qy	361 SGNYVETRPSIGSSKTITSPPYGDKSTEYVQLSPDGQKVRTTANTDVAWPNKGKVYLG 420
Db	361 SGNYVETRPSIGSSKTITSPPYGDKSTEYVQLSPDGQKVRTTANTDVAWPNKGKVYLG 420
Qy	421 VTKVDFSYDDQKNETSTQTYDSKRKNHYSQDSDQLPETTDEPLEKAYSHOLNAYE 480
Db	421 VTKVDFSYDDQKNETSTQTYDSKRKNHYSQDSDQLPETTDEPLEKAYSHOLNAYE 480
Qy	481 CFMDQRGTTFFWTHRSDFPFTWHSDFPNTDAEKITOLPVVKAYLSSGASITEGPGTGGNL 540
Db	481 CFMDQRGTTFFWTHRSDFPFTWHSDFPNTDAEKITOLPVVKAYLSSGASITEGPGTGGNL 540
Qy	541 LFLKESSNSIAFKVTLNSAAILQYRVRTRIYASTTNRLFVQNSNNDFLVITYINKTMNK 600
Db	541 LFLKESSNSIAFKVTLNSAAILQYRVRTRIYASTTNRLFVQNSNNDFLVITYINKTMNK 600
Qy	601 DDDLTQTFDATTNSNMGFSQDKNELLIGAESFSNEKYYIDKIEFIPYOL 652
Db	601 DDDLTQTFDATTNSNMGFSQDKNELLIGAESFSNEKYYIDKIEFIPYOL 652
RESULT	24
US-10-614-076-16	
Sequence 16, Application US/10614076	
Publication No. US20040033523A1	
GENERAL INFORMATION:	
APPLICANT: English, Leigh H.	
APPLICANT: Brussock, Susan M.	
APPLICANT: Malvar, Thomas M.	
APPLICANT: Bryson, James W.	
APPLICANT: Kulesza, Caroline A.	
APPLICANT: Walters, Frederick S.	
APPLICANT: Slatkin, Stephen L.	
APPLICANT: Von Tersch, Michael A.	

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RESULT 25  
 US-10-614-076-18  
 ; Sequence 18, Application US/10614076  
 ; Publication No. US20040033523A1  
 ; GENERAL INFORMATION  
 ; APPLICANT: English, Leigh H.  
 ;  
 ; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 ; FILE REFERENCE: MECO-218--1 11792-0218.DVNS01  
 ; CURRENT APPLICATION NUMBER: US10/614,076  
 ; CURRENT FILING DATE: 2003-07-03  
 ; PRIORITY NUMBER: 09/427,770  
 ; PRIORITY FILING DATE: 1999-10-27  
 ; PRIORITY APPLICATION NUMBER: 08/993,722  
 ; PRIORITY FILING DATE: 1997-12-18  
 ; NUMBER OF SEQ ID NOS: 113  
 ; SOFTWARE: PatentIn version 3.2  
 SEQ ID NO 16  
 LENGTH: 652  
 ; TYPE: PRT  
 ; ORGANISM: Artificial sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Recombinant delta endotoxin  
 US-10-614-076-16  
 Query Match 99.5%; Score 3390; DB 15; Length 652;  
 Best Local Similarity 99.5%; Pred. No. 9.6e-261;  
 Matches 649; Conservative 1; Mismatches 2; Indels 0; Gaps 0  
 Qy 1 MNPNRSEHDTIKTPNSELOTNHNOYPLADNPNSTEELNYKEFLRMTEDSSTEVDLNS 60  
 Db 1 MNPNRSEHDTIKTPNSELOTNHNOYPLADNPNSTEELNYKEFLRMTEDSSTEVDLNS 60  
 Qy 61 TVKDAVGTG1SIVVGQ1LGYVGVPFAGALTSPYQSFNLTIPSDADPKAFMAQVEVLIDK 120  
 Db 61 TVKDAVGTG1SIVVGQ1LGYVGVPFAGALTSPYQSFNLTIPSDADPKAFMAQVEVLIDK 120  
 Qy 121 KIEEYAKSKAELQGLQNNFEDYNNALNSMKTKP1LJSRSQDRLRELFSQAEISHFRN 180  
 Db 121 KIEEYAKSKAELQGLQNNFEDYNNALNSMKTKP1LJSRSQDRLRELFSQAEISHFRN 180  
 Qy 181 SMPSFAVSKPKEVLFLPLTYAQDANTHLLKDAQVGFQEWGYSSEDVAEFYHQLKLTQY 240  
 Db 181 SMPSFAVSKPKEVLFLPLTYAQDANTHLLKDAQVGFQEWGYSSEDVAEFYHQLKLTQY 240  
 Qy 241 TDHCVNWVNGLNGLRGSTDAWVKNPFRERMTLTVLDFPFDYDILYSGVKYTEL 300  
 Db 241 TDHCVNWVNGLNGLRGSTDAWVKNPFRERMTLTVLDFPFDYDILYSGVKYTEL 300  
 Qy 301 TRDIFTDP1FLSLNT1QYKGTPFLSENSIKPHFLPYLOGIEFHFLRQLQPGYFGKDFQSYW 360  
 Db 301 TRDIFTDP1FLSLNT1QYKGTPFLSENSIKPHFLPYLOGIEFHFLRQLQPGYFGKDFQSYW 360  
 Qy 361 SGNYETRSPSIGSSKTITSFYGDKSTEPVQKLSPDGQKYRTIANTDVAAWPGKVLG 420  
 Db 361 SGNYETRSPSIGSSKTITSFYGDKSTEPVQKLSPDGQKYRTIANTDVAAWPGKVLG 420  
 Qy 421 VTKYDFSQYDDQKNETSTQYDSKRNNGHVAQDSIDQLPETTDEPLEKAYSHQLNQYAE 480  
 Db 421 VTKYDFSQYDDQKNETSTQYDSKRNNGHVAQDSIDQLPETTDEPLEKAYSHQLNQYAE 480  
 Qy 481 CPMQDQRGRTGTTIPFTWTHRSVDFNTIDAEEKITQLPVVKAYALSSCASI1E2GPFTGGNL 540  
 Db 481 CPMQDQRGRTGTTIPFTWTHRSVDFNTIDAEEKITQLPVVKAYALSSCASI1E2GPFTGGNL 540  
 Qy 541 LFLIKESSNIAKPKVTLNSAALLQYRVR1YASTTNRLFVQNSNNDFLVYIYINCKMN 600  
 Db 541 LFLIKESSNIAKPKVTLNSAALLQYRVR1YASTTNRLFVQNSNNDFLVYIYINCKMN 600  
 Qy 601 DDDLYTQFDLATTNSNMGFSGDKNQBL1IGAESPNSNEK1YIDKLEFIPVQL 652  
 Db 601 DDDLYTQFDLATTNSNMGFSGDKNQBL1IGAESPNSNEK1YIDKLEFIPVQL 652  
 ;



Db	421	VTKVDFSQYDDQKNETSTQTYDSKRNNNGHVSQDSDIDQDPETTDEPLEKAYSHOLNVAE	480	Qy	361	SGNYVETRSPIGSSKTTSPFYGDPKSTEVPQKLSFDGQYRVTANTDVAAPNGKVYLG	420
Qy	481	CFLMODRGTIPFFWTHRSVDFNTIDEAKITOLPVVAKAYAASSGASISLEGPGFTGNNI	540	Db	360	SGNYVETRSPIGSSKTTSPFYGDPKSTEVPQKLSFDGQYRVTANTDVAAPNGKVYLG	419
Db	481	CFLMODRGTIPFFWTHRSVDFNTIDEAKITOLPVVAKAYAASSGASISLEGPGFTGNNI	540	Qy	421	VTKVDFSQYDDQKNETSTQTYDSKRNNNGHVSQDSDIDQDPETTDEPLEKAYSHOLNVAE	480
Qy	541	LFLKESNSNIAKFKYTLNSALLQYRYRIVASTNLLPVQNSNNDELVYINKTNK	600	Db	420	VTKVDFSQYDDQKNETSTQTYDSKRNNNGHVSQDSDIDQDPETTDEPLEKAYSHOLNVAE	479
Db	541	LFLKESNSNIAKFKYTLNSALLQYRYRIVASTNLLPVQNSNNDELVYINKTNK	600	Qy	481	CFLMODRGTIPFFWTHRSVDFNTIDEAKITOLPVVAKAYASSGASISLEGPGFTGNNI	540
Qy	601	DDDLTYQTDFLATTNNSMGSGDKNELIGAESPVSNKEIYIDKIEFIPVQL	652	Db	480	CFLMODRGTIPFFWTHRSVDFNTIDEAKITOLPVVAKAYASSGASISLEGPGFTGNNI	539
Db	601	DDDLTYQTDFLATTNNSMGSGDKNELIGAESPVSNKEIYIDKIEFIPVQL	652	Qy	541	LFLKESNSNIAKFKYTLNSALLQYRYRIVASTNLLPVQNSNNDELVYINKTNK	600
RESULT 28				Db	540	LFLKESNSNIAKFKYTLNSALLQYRYRIVASTNLLPVQNSNNDELVYINKTNK	599
US-10-614-076-52				Qy	601	DDDLTYQTDFLATTNNSMGSGDKNELIGAESPVSNKEIYIDKIEFIPVQL	652
Sequence 52, Application US/10614076				Db	600	DDDLTYQTDFLATTNNSMGSGDKNELIGAESPVSNKEIYIDKIEFIPVQL	651
Publication No. US20040033523A1				RESULT 29			
GENERAL INFORMATION:				US-10-614-076-24			
APPLICANT: English, Leigh H.				Sequence 24, Application US/10614076			
APPLICANT: Brussock, Susan M.				Publication No. US20040033523A1			
APPLICANT: Malvar, Thomas M.				GENERAL INFORMATION:			
APPLICANT: Bryson, James W.				APPLICANT: English, Leigh H.			
APPLICANT: Kulesza, Caroline A.				APPLICANT: Brussock, Susan M.			
APPLICANT: Walters, Frederick S.				APPLICANT: Malvar, Thomas M.			
APPLICANT: Slatin, Stephen L.				APPLICANT: Bryson, James W.			
APPLICANT: Von Tersch, Michael A.				APPLICANT: Kulesza, Caroline A.			
TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS				APPLICANT: Walters, Frederick S.			
FILE REFERENCE: MECO-218--1 11792-0218 DVUS01				APPLICANT: Slatin, Stephen L.			
CURRENT APPLICATION NUMBER: US/10/614,076				APPLICANT: Von Tersch, Michael A.			
CURRENT FILING DATE: 2003-07-03				TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS			
PRIOR APPLICATION NUMBER: 09/27,770				FILE REFERENCE: MECO-218--1 11792-0218 DVUS01			
PRIOR FILING DATE: 1999-10-27				CURRENT APPLICATION NUMBER: US/10/614,076			
PRIOR APPLICATION NUMBER: 08/993,722				CURRENT FILING DATE: 2003-07-03			
PRIOR FILING DATE: 1997-12-18				PRIOR APPLICATION NUMBER: 09/427,770			
NUMBER OF SEQ ID NOS: 113				PRIOR FILING DATE: 1999-10-27			
SOFTWARE: PatentIn version 3.2				PRIOR APPLICATION NUMBER: 08/993,722			
SEQ ID NO: 52				NUMBER OF SEQ ID NOS: 113			
LENGTH: 651				SOFTWARE: PatentIn version 3.2			
TYPE: PRT				SEQ ID NO: 24			
ORGANISM: Artificial sequence				LENGTH: 652			
FEATURE:				TYPE: PRT			
OTHER INFORMATION: Recombinant delta endotoxin				ORGANISM: Artificial sequence			
US-10-614-076-52				FEATURE:			
Query Match	99.5%	Score 3387.5; DB 15; Length 651;		OTHER INFORMATION: Recombinant delta endotoxin			
Best Local Similarity	99.7%	Pred. No 1.5e-260;		OTHER INFORMATION: Recombinant delta endotoxin			
Matches 650; Conservative	1;	Mismatches 0; Indels 1; Gaps 1;		OTHER INFORMATION: Recombinant delta endotoxin			
Qy	1	MNPNNRSEHDITKTPNSLQTNHQNPADNPNSTLPLNKEFLRMTDSSTEVDLNS	60	US-10-614-076-24			
Db	1	MNPNNRSEHDITKTPNSLQTNHQNPADNPNSTLPLNKEFLRMTDSSTEVDLNS	60	Query Match	99.4%	Score 3387; DB 15; Length 652;	
Qy	61	TVKDAVGTSVQIPLTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	120	Best Local Similarity	99.4%	Pred. No. 1.7e-260;	
Db	61	TVKDAVGTSVQIPLTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	119	Matches 648; Conservative	2;	Mismatches 2; Indels 0; Gaps 0;	
Qy	121	KIEBEYAKSKALAEQGLQNLNFEDYNAWKKTPLSLRSKRSQDRTRFLFQAEASHPRN	180	Qy	1	MNPNNRSEHDITKTPNSLQTNHQNPADNPNSTLPLNKEFLRMTDSSTEVDLNS	60
Db	120	KIEBEYAKSKALAEQGLQNLNFEDYNAWKKTPLSLRSKRSQDRTRFLFQAEASHPRN	179	Db	1	MNPNNRSEHDITKTPNSLQTNHQNPADNPNSTLPLNKEFLRMTDSSTEVDLNS	60
Qy	181	SMPSPAVSKPKEVLFLPTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	240	Qy	61	TVKDAVGTSVQIPLTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	120
Db	180	SMPSPAVSKPKEVLFLPTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	239	Db	61	TVKDAVGTSVQIPLTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	120
Qy	241	TDHCVNWNVGLNGLRGSTYDAAWYKFNRFREMTLTVLIVLFFPDIRLYSKGVKTEL	300	Qy	121	KIEBEYAKSKALAEQGLQNLNFEDYNAWKKTPLSLRSKRSQDRTRFLFQAEASHPRN	180
Db	240	TDHCVNWNVGLNGLRGSTYDAAWYKFNRFREMTLTVLIVLFFPDIRLYSKGVKTEL	299	Db	121	KIEBEYAKSKALAEQGLQNLNFEDYNAWKKTPLSLRSKRSQDRTRFLFQAEASHPRN	180
Qy	301	TRDIFTDPFLSNTLQKEYGPTFELSIENSTRKPHLFYLOGIEFHTRLOGYFGKDSFNYW	360	Qy	181	SMPSPAVSKPKEVLFLPTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	240
Db	300	TRDIFTDPFLSNTLQKEYGPTFELSIENSTRKPHLFYLOGIEFHTRLOGYFGKDSFNYW	359	Db	181	SMPSPAVSKPKEVLFLPTYQAANTHLLIIKDAQVGEENGYSSDVAFFYHROLKLTOQY	240

Query 241 TDHCVNWNNGLNGRSTDAWKPNRFRREMTLTVLDLJVLFPFYDIRLYSKGVKTEL 300  
 Db 241 TDHCVNWNNGLNGRSTDAWKPNRFRREMTLTVLDLJVLFPFYDIRLYSKGVKTEL 300  
 Query 301 TRDIFDPISLNTLOGYGPFLSIEINSIRKPHFLPDYLOGIEFPHTRLQGYFGKDSFNYW 360  
 Db 301 TRDIFDPISLNTLOGYGPFLSIEINSIRKPHFLPDYLOGIEFPHTRLQGYFGKDSFNYW 360  
 Query 361 SGNYVETRSPICSSKTTSPFGDKSTEPEVOLSPFGQKTYRTRIANTDVAWPCKVLG 420  
 Db 361 SGNYVETRSPICSSKTTSPFGDKSTEPEVOLSPFGQKTYRTRIANTDVAWPCKVLG 420  
 Query 421 VTKVDFQYDDORNETSQTYDSKRNGHVAQDSIDQLPETTDEPLEKAYSHOLNAYE 480  
 Db 421 VTKVDFQYDDORNETSQTYDSKRNGHVAQDSIDQLPETTDEPLEKAYSHOLNAYE 480  
 Query 481 CPMQDRGTTIPFPTMTHRSDVFFNTDAEKITOLPVKVALSSASIEBGPFTGNNL 540  
 Db 481 CPMQDRGTTIPFPTMTHRSDVFFNTDAEKITOLPVKVALSSASIEBGPFTGNNL 540  
 Query 541 LFLKESNSIAFKVTLNSAALLQRVVRVYASTNLRLFVQNSNDFLYVINKTMNK 600  
 Db 541 LFLKESNSIAFKVTLNSAALLQRVVRVYASTNLRLFVQNSNDFLYVINKTMNK 600  
 Query 601 DDDLTQTFDLATTNSNGFSCKNEIYDKAEBTIPQOL 652  
 Db 601 DDDLTQTFDLATTNSNGFSCKNEIYDKAEBTIPQOL 652  
 Query 652  
 Db 652

RESULT 30  
 US-10-614-076-28  
 ; Sequence 28, Application US/10614076  
 ; Publication No. US20040033523A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: English, Leigh H.  
 ; APPLICANT: Brussock, Susan M.  
 ; APPLICANT: Bryson, James W.  
 ; APPLICANT: Kuleza, Caroline A.  
 ; APPLICANT: Malvar, Thomas M.  
 ; APPLICANT: Walters, Frederick S.  
 ; APPLICANT: Slatin, Stephen L.  
 ; APPLICANT: Von Tersch, Michael A.  
 ; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 ; FILE REFERENCE: MECO:218--1 11792,0218.DVUS01  
 ; CURRENT APPLICATION NUMBER: US/10/614,076  
 ; CURRENT FILING DATE: 2003-07-03  
 ; PRIOR APPLICATION NUMBER: 09/427,770  
 ; PRIOR FILING DATE: 1999-10-27  
 ; PRIOR APPLICATION NUMBER: 08/993,722  
 ; PRIOR FILING DATE: 1997-12-18  
 ; NUMBER OF SEQ ID NOS: 113  
 ; SOFTWARE: PatentIn version 3.2  
 ; SEQ ID NO: 46  
 ; LENGTH: 652  
 ; TYPE: PRT  
 ; ORGANISM: Artificial sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Recombinant delta endotoxin  
 ; US-10-614-076-28

Query Match 99.4%; Score 3386; DB 15; Length 652;  
 Best Local Similarity 99.4%; Pred. No. 2e-260;  
 Matches 648; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Query 1 MNPNRNSEDTIKTPNSLQTNQYPLADPNSTLEBNYKEFLMTEDSSTEVLNDS 60  
 Db 1 MNPNRNSEDTIKTPNSLQTNQYPLADPNSTLEBNYKEFLMTEDSSTEVLNDS 60  
 Query 61 TVDAVGTG1S7VQGILGVGVPAGALTQYQSLNTWPSADPKMAQEVLIDK 120  
 Db 61 TVDAVGTG1S7VQGILGVGVPAGALTQYQSLNTWPSADPKMAQEVLIDK 120  
 Query 121 KIEBYAKSKALAEIQLGLQNNFEDYVNAWSKCTPLSRSKRSQDRTRFLFSQAESHFRN 180  
 Db 121 KIEBYAKSKALAEIQLGLQNNFEDYVNAWSKCTPLSRSKRSQDRTRFLFSQAESHFRN 180  
 Query 181 SMPSPAVSKPEVFLPFTAQAAANTHLLKDAQVFGEMGYSSEDVAFFYHROLKLTKQY 240  
 Db 181 SMPSPAVSKPEVFLPFTAQAAANTHLLKDAQVFGEMGYSSEDVAFFYHROLKLTKQY 240  
 Query 241 TDHCVNWNNGLNGRSTDAWKPNRFRREMTLTVLDLJVLFPFYDIRLYSKGVKTEL 300  
 Db 241 TDHCVNWNNGLNGRSTDAWKPNRFRREMTLTVLDLJVLFPFYDIRLYSKGVKTEL 300  
 Query 301 TRDIFTDPISLNTLOGYGPFLSIEINSIRKPHFLPDYLOGIEFPHTRLQGYFGKDSFNYW 360  
 Db 301 TRDIFTDPISLNTLOGYGPFLSIEINSIRKPHFLPDYLOGIEFPHTRLQGYFGKDSFNYW 360  
 Query 361 SGNYVETRSPICSSKTTSPFGDKSTEPEVOLSPFGQKTYRTRIANTDVAWPCKVLG 420  
 Db 361 SGNYVETRSPICSSKTTSPFGDKSTEPEVOLSPFGQKTYRTRIANTDVAWPCKVLG 420  
 Query 421 VTKVDFQYDDORNETSQTYDSKRNGHVAQDSIDQLPETTDEPLEKAYSHOLNAYE 480  
 Db 421 VTKVDFQYDDORNETSQTYDSKRNGHVAQDSIDQLPETTDEPLEKAYSHOLNAYE 480  
 Query 481 CPMQDRGTTIPFPTMTHRSDVFFNTDAEKITOLPVKVALSSASIEBGPFTGNNL 540  
 Db 481 CPMQDRGTTIPFPTMTHRSDVFFNTDAEKITOLPVKVALSSASIEBGPFTGNNL 540  
 Query 541 LFLKESNSIAFKVTLNSAALLQRVVRVYASTNLRLFVQNSNDFLYVINKTMNK 600  
 Db 541 LFLKESNSIAFKVTLNSAALLQRVVRVYASTNLRLFVQNSNDFLYVINKTMNK 600  
 Query 601 DDDLTQTFDLATTNSNGFSCKNEIYDKAEBTIPQOL 652  
 Db 601 DDDLTQTFDLATTNSNGFSCKNEIYDKAEBTIPQOL 652  
 Query 652  
 Db 652

RESULT 31  
 US-10-614-076-46  
 ; Sequence 46, Application US/10614076  
 ; Publication No. US20040033523A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: English, Leigh H.  
 ; APPLICANT: Brussock, Susan M.  
 ; APPLICANT: Malvar, Thomas M.  
 ; APPLICANT: Bryson, James W.  
 ; APPLICANT: Kuleza, Caroline A.  
 ; APPLICANT: Walters, Frederick S.  
 ; APPLICANT: Slatin, Stephen L.  
 ; APPLICANT: Von Tersch, Michael A.  
 ; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 ; FILE REFERENCE: MECO:218--1 11792,0218.DVUS01  
 ; CURRENT APPLICATION NUMBER: US/10/614,076  
 ; CURRENT FILING DATE: 2003-07-03  
 ; PRIOR APPLICATION NUMBER: 09/427,770  
 ; PRIOR FILING DATE: 1999-10-27  
 ; PRIOR APPLICATION NUMBER: 08/993,722  
 ; PRIOR FILING DATE: 1997-12-18  
 ; NUMBER OF SEQ ID NOS: 113  
 ; SOFTWARE: PatentIn version 3.2  
 ; SEQ ID NO: 46  
 ; LENGTH: 652  
 ; TYPE: PRT  
 ; ORGANISM: Artificial sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Recombinant delta endotoxin  
 ; US-10-614-076-46

Query Match 99.4%; Score 3385; DB 15; Length 652;  
 Best Local Similarity 99.4%; Pred. No. 2.4e-260;  
 Matches 648; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Query 1 MNPNRNSEDTIKTPNSLQTNQYPLADPNSTLEBNYKEFLMTEDSSTEVLNDS 60  
 Db 1 MNPNRNSEDTIKTPNSLQTNQYPLADPNSTLEBNYKEFLMTEDSSTEVLNDS 60  
 Query 61 TVDAVGTG1S7VQGILGVGVPAGALTQYQSLNTWPSADPKMAQEVLIDK 120  
 Db 61 TVDAVGTG1S7VQGILGVGVPAGALTQYQSLNTWPSADPKMAQEVLIDK 120  
 Query 121 KIEBYAKSKALAEIQLGLQNNFEDYVNAWSKCTPLSRSKRSQDRTRFLFSQAESHFRN 180

Db	1 MNPNRSEHDITKVTPTNSELQPLADNPNSTLLEINYKEFIRMTEDSSEVLDSN 60
Qy	61 TVKDAVGIGSYVQGQILGVGVYFAGALTFSYQSFINTIWPDSADPWFKAQAEVFLDK 120
Db	61 TVKDAVGIGSYVQGQILGVGVYFAGALTFSYQSFINTIWPDSADPWFKAQAEVFLDK 120
Qy	121 KIEYAKSKAELQGLQNNPFDYVNLNSMKKTPSLRSRSQDIRELFSQAEHFRN 180
Db	121 KIEYAKSKAELQGLQNNPFDYVNLNSMKKTPSLRSRSQDIRELFSQAEHFRN 180
Qy	181 SMSFAVSKFPEVFLPYAQAAANTHLLLKDQVFGEWGYSSEDVAEFYHQLKTQQY 240
Db	181 SMSFAVSKFPEVFLPYAQAAANTHLLLKDQVFGEWGYSSEDVAEFYHQLKTQQY 240
Qy	241 TDICVNWVNGLNGLRSYDIAWVKFNFRREMILTVLDLIVLPFDYIRLSKGKVTEL 300
Db	241 TDICVNWVNGLNGLRSYDIAWVKFNFRREMILTVLDLIVLPFDYIRLSKGKVTEL 300
Qy	301 TRIDIFTPIFSINTLQEXGPTLSEINSIRKPHFLDYQIIFHTRLQPGYFGKDSFNTW 360
Db	301 TRIDIFTPIFSINTLQEXGPTLSEINSIRKPHFLDYQIIFHTRLQPGYFGKDSFNTW 360
Qy	361 SGNYVETRPSIGSSKTTSPFGDKSTEPVQKLSFGQKTYRTIANTDVAAPNGKVYLG 420
Db	361 SGNYVETRPSIGSSKTTSPFGDKSTEPVQKLSFGQKTYRTIANTDVAAPNGKVYLG 420
Qy	421 VTKVDFSYQDDQNETSTQYDTSKRNGHVSQDSIDQLPBPETDDEPLEKASHOLNTAE 480
Db	421 VTKVDFSYQDDQNETSTQYDTSKRNGHVSQDSIDQLPBPETDDEPLEKASHOLNTAE 480
Qy	481 CFIMQDRGTRTIPFTWTHRSDFNTIDAEKITLPVVKAYALSSGASLIEGPGFTGGNL 540
Db	481 CFIMQDRGTRTIPFTWTHRSDFNTIDAEKITLPVVKAYALSSGASLIEGPGFTGGNL 540
Qy	541 LFKEKESNSIAKFKVTLNSAALLQYKVRVIRYASTNLRFVQNSNNDFLVYINKTMK 600
Db	541 LFKEKESNSIAKFKVTLNSAALLQYKVRVIRYASTNLRFVQNSNNDFLVYINKTMK 600
Qy	601 DDDLTQFDLATTNSANGFSQDKNLIGAESFVSEKJYIDKLFIPVQL 652
Db	601 DDDLTQFDLATTNSANGFSQDKNLIGAESFVSEKJYIDKLFIPVQL 652

RESULT 32  
US-10-014-076-22  
Sequence 22, Application US/10614076  
; Publication No. US20040033523A1  
; GENERAL INFORMATION  
; APPLICANT: English, Leigh H.  
; APPLICANT: Brussock, Susan M.  
; APPLICANT: Malivar, Thomas M.  
; APPLICANT: Bryson, James W.  
; APPLICANT: Kulesza, Caroline A.  
; APPLICANT: Walters, Frederick S.  
; APPLICANT: Slatin, Stephen L.  
; APPLICANT: Von Tersch, Michael A.  
TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
FILE REFERENCE: MECO:21:8--1 11792, 0218, DVUS01  
CURRENT APPLICATION NUMBER: US/10/614,076  
CURRENT FILING DATE: 2003-07-03  
PRIOR APPLICATION NUMBER: 09/427,770  
PRIOR FILING DATE: 1999-10-07  
PRIOR APPLICATION NUMBER: 08/993,722  
PRIOR FILING DATE: 1997-12-18  
NUMBER OF SEQ ID NOS: 113  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 22  
LENGTH: 652  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Recombinant delta endotoxin  
US-10-014-076-22

Query	Match	99.3%	Score 3382;	DB 15;	Length 652;
Best Local	Similarity	99.4%	Prod. No. 4-2e-260;		
Matches	Conservative	1;	Mismatches 3;	Indels 0;	Gaps 0
Matches	648;				
Db	Dy	1	MNPNNRSEHDITKTPNSBLQTNHNOYPLADNPNTSLEBLNTKFRLMTEDSSTEVLDS	60	
Db	Dy	1	MNPNNRSEHDITKTPNSBLQTNHNOYPLADNPNTSLEBLNTKFRLMTEDSSTEVLDS	60	
Db	Dy	61	TYKDAGTGISYVGQILGVGVGYPFAGALTSTFYOSFLNTIWPSPDAFPKAFAQVEVLJDK	120	
Db	Dy	61	TYKDAGTGISYVGQILGVGVGYPFAGALTSTFYOSFLNTIWPSPDAFPKAFAQVEVLJDK	120	
Db	Dy	121	KIBEYAKSKAELQIQLQNNPFDYVNAIWSKCTPLSLRSKRSQDRTRLEFSAESHERN	180	
Db	Dy	121	KIBEYAKSKAELQIQLQNNPFDYVNAIWSKCTPLSLRSKRSQDRTRLEFSAESHERN	180	
Db	Dy	181	SMPSFAVSKFEVLPLPYQAANTHLLLKDQVFGEWGYSSEDAVEFYRQLKLQQY	240	
Db	Dy	181	SMPSFAVSKFEVLPLPYQAANTHLLLKDQVFGEWGYSSEDAVEFYRQLKLQQY	240	
Db	Dy	241	TDHCVNWNNGVLNGLRGSTYDAWKENRFRRENTLTVDLIVLFPFYDIRLYSKGVKTEL	300	
Db	Dy	241	TDHCVNWNNGVLNGLRGSTYDAWKENRFRRENTLTVDLIVLFPFYDIRLYSKGVKTEL	300	
Db	Dy	301	TRDIFTDPFISLNTLQBYGPTPLSIEISIRKPHFDYDQGKFSPHTRLQPGYFQGKDSFNYW	360	
Db	Dy	301	TRDIFTDPFISLNTLQBYGPTPLSIEISIRKPHFDYDQGKFSPHTRLQPGYFQGKDSFNYW	360	
Db	Dy	361	SGNYVERPSTGSSSKTITSPFPGDKSTEPVQKLSDGOKVYRTIANTDVAAVNGKYLG	420	
Db	Dy	361	SGNYVERPSTGSSSKTITSPFPGDKSTEPVQKLSDGOKVYRTIANTDVAAVNGKYLG	420	
Db	Dy	421	VTKVDFSQYDDKNETSTQTYDSKRNGHVSQAQSIDQLPPTTDEPLEKAYSHQLNAYE	480	
Db	Dy	421	VTKVDFSQYDDKNETSTQTYDSKRNGHVSQAQSIDQLPPTTDEPLEKAYSHQLNAYE	480	
Db	Dy	481	CPLMDQDRGTTFFWTHRSVDFFNTDAEKITQLPVVKAYALSQASIIIEGPGFTGQNL	540	
Db	Dy	481	CPLMDQDRGTTFFWTHRSVDFFNTDAEKITQLPVVKAYALSQASIIIEGPGFTGQNL	540	
Db	Dy	541	LPLKESSNSIAKPKTTLNSAALLQFVRVIRASTMNLFLVQNSNNDFLVYINCKTMK	600	
Db	Dy	541	LPLKESSNSIAKPKTTLNSAALLQFVRVIRASTMNLFLVQNSNNDFLVYINCKTMK	600	
Db	Dy	601	DDDLTYQFDLATTNSMNGFSGDKNELLIGAESFSVSNEKIYIDKIEFIPVQL	652	
Db	Dy	601	DDDLTYQFDLATTNSMNGFSGDKNELLIGAESFSVSNEKIYIDKIEFIPVQL	652	



APPLICANT: Kulesza, Caroline A.  
 APPLICANT: Walters, Frederick S.  
 APPLICANT: Slatin, Stephen L.  
 APPLICANT: Von Tersch, Michael A.  
 TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 FILE REFERENCE: MECO-218--1 11792-0218.DVUS01  
 CURRENT APPLICATION NUMBER: US/10/614,076  
 CURRENT FILING DATE: 2003-07-03  
 CURRENT APPLICATION NUMBER: 09/427,770  
 PRIORITY FILING DATE: 1999-10-27  
 PRIORITY APPLICATION NUMBER: 08/993,722  
 PRIORITY FILING DATE: 1997-12-18  
 NUMBER OF SEQ ID NOS: 113  
 SOFTWARE: PatentIn version 3.2  
 SEQ ID NO: 50  
 LENGTH: 632  
 TYPE: PRT  
 ORGANISM: Artificial sequence  
 FEATURE:  
 OTHER INFORMATION: Recombinant delta endotoxin  
 US-10-614-076-50

Query Match 99.2%; Score 3379; DB 15; Length 652;  
 Best Local Similarity 99.1%; Pred. No. 7.2e-260;  
 Matches 616; Conservative 2; Mismatches 4; Indels 0; Gaps 0;  
 Qy 1 MNPNRNRSEHTIKTPNSLQTNINQYPADNPNSTLRLNKFRLMTEDSSTEVLNDS 60  
 Db 1 MNPNRNRSEHTIKTPNSLQTNINQYPADNPNSTLRLNKFRLMTEDSSTEVLNDS 60  
 Qy 61 TVDAVGTRGTSVQGILGVGVPPAGALTSTFYQSFLNTWPSADPWAQAEVILDK 120  
 Db 61 TVDAVGTRGTSVQGILGVGVPPAGALTSTFYQSFLNTWPSADPWAQAEVILDK 120  
 Qy 121 KIEBYAKSKALAELQGQNFDYTNALNWKTKPLSLRSKRSQDRTRFLPSQAESHRN 180  
 Db 121 KIEBYAKSKALAELQGQNFDYTNALNWKTKPLSLRSKRSQDRTRFLPSQAESHRN 180  
 Qy 181 SMPPFAVSKRFEVLEPLPTYAQAANTHLLIKDQAQFGEEMGYSSEDVAEYHROLKLQQY 240  
 Db 181 SMPSFAVSKRFEVLEPLPTYAQAANTHLLIKDQAQFGEEMGYSSEDVAEYHROLKLQQY 240  
 Qy 241 TDHCVNWNVNGLNLRGSTYDANVKFRFRMTLTVLDLIVLFFPYDILRYSKGKVTEL 300  
 Db 241 TDHCVNWNVNGLNLRGSTYDANVKFRFRMTLTVLDLIVLFFPYDILRYSKGKVTEL 300  
 Qy 301 TRDIFTDPFISLNLTLQEQYCPTELSIENSIRKPHLFDYLQGIEFHTRLQGYFQKDSFNYW 360  
 Db 301 TRDIFTDPFISLNLTLQEQYCPTELSIENSIRKPHLFDYLQGIEFHTRLQGYFQKDSFNYW 360  
 Qy 361 SGNYVETRSIGSSKTTISPFYGDKSTEVQKUSFDGOKVYRTIANTDVAANGKTYLG 420  
 Db 361 SGNYVETRSIGSSKTTISPFYGDKSTEVQKUSFDGOKVYRTIANTDVAANGKTYLG 420  
 Qy 421 VTKVDFSQYDQNETSTOTYDSKRNGHVSQDSIDOLPPTTDEPLEKAYSHQLNAYA 480  
 Db 421 VTKVDFSQYDQNETSTOTYDSKRNGHVSQDSIDOLPPTTDEPLEKAYSHQLNAYA 480  
 Qy 481 CFLMDQRRTIPFTWHSVDPENTIDAERKITOLPVYKAYAASSGASIEGPGFTGQNL 540  
 Db 481 CFLMDQRRTIPFTWHSVDPENTIDAERKITOLPVYKAYAASSGASIEGPGFTGQNL 540  
 Qy 541 LPKEKSSNIAKFKVTLNSAALLQRYRIVRASSTNRLFVNSNNDFLVYINKTMNK 600  
 Db 541 LPKEKSSNIAKFKVTLNSAALLQRYRIVRASSTNRLFVNSNNDFLVYINKTMNK 600  
 Qy 601 DDDLTQFTDLATNSNNGFSGDQNETLIGAESFSNEKUYIDKIEFIPVQL 652  
 Db 601 DDDLTQFTDLATNSNNGFSGDQNETLIGAESFSNEKUYIDKIEFIPVQL 652  
 Qy 481 CFLMDQRGTIPFTWHSVDPENTIDAERKITOLPVYKAYAASSGASIEGPGFTGQNL 540  
 Db 481 CFLMDQRGTIPFTWHSVDPENTIDAERKITOLPVYKAYAASSGASIEGPGFTGQNL 540  
 Qy 541 LPKEKSSNIAKFKVTLNSAALLQRYRIVRASSTNRLFVNSNNDFLVYINKTMNK 600  
 Db 541 LPKEKSSNIAKFKVTLNSAALLQRYRIVRASSTNRLFVNSNNDFLVYINKTMNK 600

RESULT 37

US-10-232-665-8

Sequence 8, Application US/10232665

GENERAL INFORMATION:

APPLICANT: Romano, Charles P. Improved Expression of Cry3Bb Insecticidal Protein in Plants

FILE REFERENCE: 38-21(15304) Cry3Bb Improved Exp. Corn

CURRENT APPLICATION NUMBER: US/10/232,665

PRIOR APPLICATION NUMBER: 2002-08-29

PRIOR FILING DATE: 1999-08-19

NUMBER OF SEQ ID NOS: 43

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 8

LENGTH: 653

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: non-naturally occurring amino acid sequence encoded by SEQ ID NO:7

FEATURE:

NAME/KEY: PRT

LOCATION: (1) .. (653)

OTHER INFORMATION: amino acid sequence for Cry3Bb variant v11231 encoded by SEQ ID N US-10-232-665-8

Query Match 99.1%; Score 3377; DB 14; Length 653;

Best Local Similarity 99.4%; Pred. No. 1e-259;

Matches 647; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Query Match 99.1%; Score 3377; DB 14; Length 653;

Best Local Similarity 99.4%; Pred. No. 1e-259;

Matches 647; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Query 2 NPNNRSEHDITKVTPNSELQTNHNOYPLADNPNSTLLELNKEFLRMTEDSSTEVLNDST 61

Db 3 NPNNRSEHDITKVTPNSELQTNHNOYPLADNPNSTLLELNKEFLRMTEDSSTEVLNDST 62

Query 62 VKDAVGTCISYQI LGVGVPPAGALTSFYOSFLNTIWPSDAPWKAQVEVLIDKK 121

Db 63 VDAVGIGISVQI LGVGVPPAGALTSFYOSFLNTIWPSDAPWKAQVEVLIDKK 122

Query 122 IBEYAKSKALABEQLQLNQNFEEDYVNAWSKTPSLRSRSRSDRIRELFSQAEHFRNS 181

Db 123 IBEYAKSKALAEQQLQLNQNFEEDYVNAWSKTPSLRSRSRSDRIRELFSQAEHFRNS 182

Query 182 MPEFAVSKPFEVLEPTYQAANTHLLKKDAQVGEENGYSSDVAEYHRQLKLTQQT 241

Db 183 MPSFAVSKPFEVFLPTYQAANTHLLKKDAQVGEENGYSSDVAEYTRQLKLTQQT 242

Query 242 DHCVNWVNGLNGLRGSTYDAWKFKNRFRREMLTIVLVLIVLFFYDTRLYSKGVKTELT 301

Db 243 DHCVNWVNGLNGLRGSTYDAWKFKNRFRREMLTIVLVLIVLFFYDTRLYSKGVKTELT 302

Query 302 RDIFTDPFLSNTLQEXGPTFLSTENSIRKPHLFDYLOGIEFHTRLQGYFKGDSFNTWS 361

Db 303 RDIFTDPFLLTLQKYGPTFLSTENSIRKPHLFDYLOGIEFHTRLQGYFKGDSFNTWS 362

Query 303 RDIFTDPFLSNTLQEXGPTFLSTENSIRKPHLFDYLOGIEFHTRLQGYFKGDSFNTWS 362

Query 362 GNYVETRPSIGSSKTTSPYFGDKSTEPVQLSPDGQVYRTIANTDVAWPNKGKVYLGV 421

Db 363 GNYVETRPSIGSSKTTSPYFGDKSTEPVQLSPDGQVYRTIANTDVAWPNKGKVYLGV 422

Query 422 TKVDFSOYDQKNETSTQTYDSKRNNGHVAQDSIDQLPPTTDEPLEKAYSHQLNAYEC 481

Db 423 TKVDFSOYDQKNETSTQTYDSKRNNGHVAQDSIDQLPPTTDEPLEKAYSHQLNAYEC 482

Query 482 FLMQDRRTGTPFFTWRSVDFENTIDAEKITOLPVKAYALSSGASITEGPGFTGNNIL 541

Db 483 FLMQDRRTGTPFFTWRSVDFENTIDAEKITOLPVKAYALSSGASITEGPGFTGNNIL 542

Query 542 FLKRESSNASTAKPTVTLNSALLQRYRIRYASTNLRLFVQNSNNDFLVYI NKTNNK 601

Db 543 FLKRESSNASTAKPTVTLNSALLQRYRIRYASTNLRLFVQNSNNDFLVYI NKTNNK 602

Query 602 DDLTYOTFDLATTNSMNGFSDKNEELIGAESFVSNEKYIDKIEFPTPVQL 652

Db 603 DDLTYOTFDLATTNSMNGFSDKNEELIGAESFVSNEKYIDKIEFPTPVQL 653

RESULT 38

US-10-232-665-14

Sequence 14, Application US/10232665

GENERAL INFORMATION:

APPLICANT: Romano, Charles P. Improved Expression of Cry3Bb Insecticidal Protein in Plants

FILE REFERENCE: 38-21(15304) Cry3Bb Improved Exp. Corn

CURRENT APPLICATION NUMBER: US/10/232,665

PRIOR APPLICATION NUMBER: US/09/377,466

PRIOR FILING DATE: 1999-08-19

NUMBER OF SEQ ID NOS: 43

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 14

LENGTH: 653

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: peptide encoded by SEQ ID N US-10-232-665-14

Query Match 99.1%; Score 3377; DB 14;

Best Local Similarity 99.4%; Pred. No. 1e-259;

Matches 647; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Query 2 NPNNRSEHDITKVTPNSELQTNHNOYPLADNPNSTLLELNKEFLRMTEDSSTEVLNDST 61

Db 3 NPNNRSEHDITKVTPNSELQTNHNOYPLADNPNSTLLELNKEFLRMTEDSSTEVLNDST 62

Query 62 VDAGVGTISYQI LGVGVPPAGALTSFYOSFLNTIWPSDAPWKAQVEVLIDKK 121

Db 63 VDAGVGTISYQI LGVGVPPAGALTSFYOSFLNTIWPSDAPWKAQVEVLIDKK 122

Query 122 IBEYAKSKALABEQLQLNQNFEEDYVNAWSKTPSLRSRSRSDRIRELFSQAEHFRNS 181

Db 123 IBEYAKSKALAEQQLQLNQNFEEDYVNAWSKTPSLRSRSRSDRIRELFSQAEHFRNS 182

Query 182 MPSEFAVSKPFEVLEPTYQAANTHLLKKDAQVGEENGYSSDVAEYHRQLKLTQQT 241

Db 183 MPSFAVSKPFEVFLPTYQAANTHLLKKDAQVGEENGYSSDVAEYTRQLKLTQQT 242

Query 242 DHCVNWVNGLNGLRGSTYDAWKFKNRFRREMLTIVLVLIVLFFYDTRLYSKGVKTELT 301

Db 243 DHCVNWVNGLNGLRGSTYDAWKFKNRFRREMLTIVLVLIVLFFYDTRLYSKGVKTELT 302

Query 302 RDIFTDPFLSNTLQEXGPTFLSTENSIRKPHLFDYLOGIEFHTRLQGYFKGDSFNTWS 361

Db 303 RDIFTDPFLLTLQKYGPTFLSTENSIRKPHLFDYLOGIEFHTRLQGYFKGDSFNTWS 362

Query 303 RDIFTDPFLSNTLQEXGPTFLSTENSIRKPHLFDYLOGIEFHTRLQGYFKGDSFNTWS 362

Query 362 GNYVETRPSIGSSKTTSPYFGDKSTEPVQLSPDGQVYRTIANTDVAWPNKGKVYLGV 421

Db 363 GNYVETRPSIGSSKTTSPYFGDKSTEPVQLSPDGQVYRTIANTDVAWPNKGKVYLGV 422

Query 422 TKVDFSOYDQKNETSTQTYDSKRNNGHVAQDSIDQLPPTTDEPLEKAYSHQLNAYEC 481

Db 423 TKVDFSOYDQKNETSTQTYDSKRNNGHVAQDSIDQLPPTTDEPLEKAYSHQLNAYEC 482

Query 482 FLMQDRRTGTPFFTWRSVDFENTIDAEKITOLPVKAYALSSGASITEGPGFTGNNIL 541

Db 483 FLMQDRRTGTPFFTWRSVDFENTIDAEKITOLPVKAYALSSGASITEGPGFTGNNIL 542

Qy 542 FLKESNSIAKFKVTLNSALLQYRVRVRYASTTNLRFVQNSNNDFLVIVINKTMKD 601  
 Db 543 FLKESNSIAKFKVTLNSALLQYRVRVRYASTTNLRFVQNSNNDFLVIVINKTMKD 602

Qy 602 DDLTYQTFLATLNSMGSGDKNEELIIGAESFSNEKVIYDKEFIPVQL 652  
 Db 603 DDLTYQTFLATLNSMGSGDKNEELIIGAESFSNEKVIYDKEFIPVQL 653

RESULT 39  
 US-10-232-665-16  
 ; Sequence 16, Application US/10232665  
 ; Publication No. US20030115630A1.  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Romano, Charles P.  
 ; TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants  
 ; FILE REFERENCE: 38-1 (15304) Cry3Bb Improved Exp. Corn  
 ; CURRENT APPLICATION NUMBER: US/10/232,665  
 ; CURRENT FILING DATE: 2002-08-29  
 ; PRIOR APPLICATION NUMBER: US/09/377,466  
 ; PRIOR FILING DATE: 1999-08-19  
 ; NUMBER OF SEQ ID NOS: 43  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO: 16  
 ; LENGTH: 653  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; NAME/KEY: PRT  
 ; LOCATION: (1) . (653)  
 ; OTHER INFORMATION: Cry3Bb1 variant v11231  
 US-10-232-665-37

Query Match 99.1%; Score 3377; DB 14; Length 653;  
 Best Local Similarity 99.4%; Pred. No. 1e-259; Prod. No. 1e-259;  
 Matches 647; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 2 NPNNRSEHTIKTPNSELQTNINQYPLADNPNSTEELINYKPLRMTBDSSTEVLNDST 61  
 Db 3 NPNNRSEHTIKTPNSELQTNINQYPLADNPNSTEELINYKPLRMTBDSSTEVLNDST 62

Qy 62 VDAVGTG1SIVQ1LGTVGPPAGALTSFYQSLNLTWPSDADPKAFMAQEVLDIKK 121  
 Db 63 VDAVGTG1SIVQ1LGTVGPPAGALTSFYQSLNLTWPSDADPKAFMAQEVLDIKK 122

Qy 122 IEEYAKSKKALAEQGLQNNFEDYNAWNWKTPSLRSKRSQDRIRFLRMTBDSSTEVLNDST 61  
 Db 123 IEEYAKSKKALAEQGLQNNFEDYNAWNWKTPSLRSKRSQDRIRFLRMTBDSSTEVLNDST 62

Qy 182 MPSPAVSKPEVFLPTYQAANTHLLKDAQVGEENGYSSDVAEYHRQLKLTQQT 241  
 Db 183 MPSPAVSKPEVFLPTYQAANTHLLKDAQVGEENGYSSDVAEYRRQLKLTQQT 242

Qy 242 DHCVNWNWGLNGLRSYDAWVKNFRREMTLTVLDFLPPFYDIRLYSKGVKTLET 301  
 Db 243 DHCVNWNWGLNGLRSYDAWVKNFRREMTLTVLDFLPPFYDIRLYSKGVKTLET 302

Qy 302 RDIFTDPFLSLNTLQEQYGPFLTENSIRKPHFLDYLQGIEFTRLQPGYFGKDSFNWYS 361  
 Db 303 RDIFTDPFLFLTLQKYGFLTENSIRKPHFLDYLQGIEFTRLQPGYFGKDSFNWYS 362

Qy 362 GNYVETRPSIGSSKTTISPYGDKSTEPVQKLSFDGQVYRTANTDAWPNKGKVTLGV 421  
 Db 363 GNYVETRPSIGSSKTTISPYGDKSTEPVQKLSFDGQVYRTANTDAWPNKGKVTLGV 422

Qy 422 TKVDFSQYDQNETSTOTYDSKRNGHIVSAQDSIDQLPETTDEPLEKAYSHQLYNAC 481  
 Db 423 TKVDFSQYDQNETSTOTYDSKRNGHIVSAQDSIDQLPETTDEPLEKAYSHQLYNAC 482

Qy 482 FLMDQRRTGTTIPFPTWTHRSVDFENTIDAEKITOLPVVKAAYLSSGASIEGPGFTGGNL 541  
 Db 483 FLMDQRRTGTTIPFPTWTHRSVDFENTIDAEKITOLPVVKAAYLSSGASIEGPGFTGGNL 542

Qy 542 FLKESNSIAKFKVTLNSALLQYRVRVRYASTTNLRFVQNSNNDFLVIVINKTMKD 601  
 Db 543 FLKESNSIAKFKVTLNSALLQYRVRVRYASTTNLRFVQNSNNDFLVIVINKTMKD 602

Qy 602 DDLTYQTFLATLNSMGSGDKNEELIIGAESFSNEKVIYDKEFIPVQL 652  
 Db 603 DDLTYQTFLATLNSMGSGDKNEELIIGAESFSNEKVIYDKEFIPVQL 653

RESULT 40  
 US-10-232-665-37  
 ; Sequence 37, Application US/10232665  
 ; Publication No. US20030115630A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Romano, Charles P.  
 ; TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants  
 ; FILE REFERENCE: 38-21 (15304) Cry3Bb Improved Exp. Corn  
 ; CURRENT APPLICATION NUMBER: US/10/232,665  
 ; CURRENT FILING DATE: 2002-08-29  
 ; PRIOR APPLICATION NUMBER: US-09/377,466  
 ; PRIOR FILING DATE: 1999-08-19  
 ; NUMBER OF SEQ ID NOS: 43  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO: 37  
 ; LENGTH: 653  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; NAME/KEY: PRT  
 ; LOCATION: (1) . (653)  
 ; OTHER INFORMATION: variant Cry3Bb1 coding sequence encoding v11231  
 US-10-232-665-37

Query Match 99.1%; Score 3377; DB 14; Length 653;  
 Best Local Similarity 99.4%; Prod. No. 1e-259; Mismatches 3; Indels 0; Gaps 0;

Qy 2 NPNNRSEHTIKTPNSELQTNINQYPLADNPNSTEELINYKPLRMTBDSSTEVLNDST 61  
 Db 3 NPNNRSEHTIKTPNSELQTNINQYPLADNPNSTEELINYKPLRMTBDSSTEVLNDST 62

Qy 62 VDAVGTG1SIVQ1LGTVGPPAGALTSFYQSLNLTWPSDADPKAFMAQEVLDIKK 121  
 Db 63 VDAVGTG1SIVQ1LGTVGPPAGALTSFYQSLNLTWPSDADPKAFMAQEVLDIKK 122

Qy 122 IEEYAKSKKALAEQGLQNNFEDYNAWNWKTPSLRSKRSQDRIRFLRMTBDSSTEVLNDST 61  
 Db 123 IEEYAKSKKALAEQGLQNNFEDYNAWNWKTPSLRSKRSQDRIRFLRMTBDSSTEVLNDST 62

Qy 182 MPSPAVSKPEVFLPTYQAANTHLLKDAQVGEENGYSSDVAEYHRQLKLTQQT 241  
 Db 183 MPSPAVSKPEVFLPTYQAANTHLLKDAQVGEENGYSSDVAEYRRQLKLTQQT 242

Qy 242 DHCVNWNWGLNGLRSYDAWVKNFRREMTLTVLDFLPPFYDIRLYSKGVKTLET 301  
 Db 243 DHCVNWNWGLNGLRSYDAWVKNFRREMTLTVLDFLPPFYDIRLYSKGVKTLET 302

Qy 302 RDIFTDPFLSLNTLQEQYGPFLTENSIRKPHFLDYLQGIEFTRLQPGYFGKDSFNWYS 361  
 Db 303 RDIFTDPFLFLTLQKYGFLTENSIRKPHFLDYLQGIEFTRLQPGYFGKDSFNWYS 362

Qy 362 GNYVETRPSIGSSKTTISPYGDKSTEPVQKLSFDGQVYRTANTDAWPNKGKVTLGV 421  
 Db 363 GNYVETRPSIGSSKTTISPYGDKSTEPVQKLSFDGQVYRTANTDAWPNKGKVTLGV 422

Qy 422 TKVDFSQYDQNETSTOTYDSKRNGHIVSAQDSIDQLPETTDEPLEKAYSHQLYNAC 481  
 Db 423 TKVDFSQYDQNETSTOTYDSKRNGHIVSAQDSIDQLPETTDEPLEKAYSHQLYNAC 482

Qy 482 FLMDQRRTGTTIPFPTWTHRSVDFENTIDAEKITOLPVVKAAYLSSGASIEGPGFTGGNL 541  
 Db 483 FLMDQRRTGTTIPFPTWTHRSVDFENTIDAEKITOLPVVKAAYLSSGASIEGPGFTGGNL 542

RESULT 41  
US-10-232-665-39  
Query: PLKESNSIAKEFKVTLNSAALLQYRVRIRYASTTNRLTVQNSNNDLVIVINKTMKD 601  
Database: PLKESNSIAKEFKVTLNSAALLQYRVRIRYASTTNRLTVQNSNNDLVIVINKTMKD 602

Query: DDLTYQFDLATTNSNNGFSGDNELLIGAESFSNEKIVYDKIEFPIVQL 652  
Database: DDLTYQFDLATTNSNNGFSGDNELLIGAESFSNEKIVYDKIEFPIVQL 653

RESULT 42  
US-10-614-076-100  
Query: FILKESNSIAKEFKVTLNSAALLQYRVRIRYASTTNRLTVQNSNNDLVIVINKTMKD 601  
Database: FILKESNSIAKEFKVTLNSAALLQYRVRIRYASTTNRLTVQNSNNDLVIVINKTMKD 602

Query: DDLTYQFDLATTNSNNGFSGDNELLIGAESFSNEKIVYDKIEFPIVQL 652  
Database: DDLTYQFDLATTNSNNGFSGDNELLIGAESFSNEKIVYDKIEFPIVQL 653

RESULT 43  
US-10-614-076-100  
Query: ; Sequence 39, Application US/10232665  
Database: ; Publication No. US20030115630A1

GENERAL INFORMATION:  
; APPLICANT: Romano, Charles P.  
; TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants  
; FILE REFERENCE: 38-21 (15304) Cry3Bb Improved Exp. Corn  
; CURRENT APPLICATION NUMBER: US/10/232,665  
; CURRENT FILING DATE: 2002-08-29  
; PRIOR APPLICATION NUMBER: US/09/377,466  
; PRIOR FILING DATE: 1999-08-19  
; NUMBER OF SEQ ID NOS: 43  
; SOFTWARE: Patent in Ver. 2.0  
; SEQ ID NO: 39  
; LENGTH: 653  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; NAME/KEY: PRT  
; LOCATION: (1) . . . (653)  
; OTHER INFORMATION: variant Cry3Bb1 coding sequence encoding v11231  
; US-10-232-665-39

Query Match 99.1%; Score 3377; DB 14; Length 653;  
Best Local Similarity 99.4%; Pred. No. 1e-259; 1; Mismatches 3; Indels 0; Gaps 0;  
Matches 647; Conservative

Query: 2 NPNNRSEHDTIKVTPNSLQINHNOYPLADNNNSTLLEFLNLYKEFLEMTESSTEVLDNST 61  
Database: 3 NPNNRSEHDTIKVTPNSLQINHNOYPLADNNNSTLLEFLNLYKEFLEMTESSTEVLDNST 62

Query: 62 VDAVGTGISVQILGVGVPPAGALTFSYQFSLNTIWPSPADPKAFMAQVEVLIDKK 121  
Database: 63 VDAVGTGISVQILGVGVPPAGALTFSYQFSLNTIWPSPADPKAFMAQVEVLIDKK 122

Query: 122 IEEYAKSKKLAELQGLQNFEDVNAINSWKCTPLSRSKRSQDRLEFLNLYKEFLEMTESSTEVLDNST 61  
Database: 123 IEEYAKSKKLAELQGLQNFEDVNAINSWKCTPLSRSKRSQDRLEFLNLYKEFLEMTESSTEVLDNST 62

Query: 182 MPSFAVSKTEVFLPTYQAQANTHLLIKDAQFGEENGYSSVEDVAFYHRLKLTCQYT 241  
Database: 183 MPSFAVSKTEVFLPTYQAQANTHLLIKDAQFGEENGYSSVEDVAFYHRLKLTCQYT 242

Query: 242 DHCYNNWINGLNGLRGSTDYDWTKFNFRREMTLTVLDLIVLFFPYDIRLYSKGVKTEL 301  
Database: 243 DHCYNNWINGLNGLRGSTDYDWTKFNFRREMTLTVLDLIVLFFPYDIRLYSKGVKTEL 302

Query: 302 RDIFTDPPLSLNTLQEYGTFLSTENSRKPHLFDYLOGIEFHTRLQGPFQKDSFENYWS 361  
Database: 303 RDIFTDPPLSLNTLQEYGTFLSTENSRKPHLFDYLOGIEFHTRLQGPFQKDSFENYWS 362

Query: 362 GNYVETRPSIGSSKTKTSPYQKLSFDQKQVYRTANTDVAWPKYKVLG 421  
Database: 363 GNYVETRPSIGSSKTKTSPYQKLSFDQKQVYRTANTDVAWPKYKVLG 422

Query: 422 TKVDFSQYDDQKNETSTQYDTSKRNNGHVAQDSIDOLPPTDEPLEKAYSHOLNTAEC 481  
Database: 423 TKVDFSQYDDQKNETSTQYDTSKRNNGHVAQDSIDOLPPTDEPLEKAYSHOLNTAEC 482

Query: 482 FLMQDRRGTTPFFTWTHRSYDFPNTIDARKITQLPVVKAYALSSGASIEGPGFTGENL 541  
Database: 483 FLMQDRRGTTPFFTWTHRSYDFPNTIDARKITQLPVVKAYALSSGASIEGPGFTGENL 542

QY 422 TKVDFSQYDDQNETSTQTYDSKRNGHYSQDSDOLPPETTDBPLEKAYSHOLNYAEC 481  
 Db 423 TKVDFSQYDDQNETSTQTYDSKRNGHYSQDSDOLPPETTDBPLEKAYSHOLNYAEC 482

QY 482 FLMQDRGTTPFPTWTHRSVDFENTIDAEEKITOLPVVKAYALSGASIEBGPFTGNL 541  
 Db 483 FLMQDRGTTPFPTWTHRSVDFENTIDAEEKITOLPVVKAYALSGASIEBGPFTGNL 542

QY 542 FLKESNSNIAKFKTYTLNSAALLQRYRVRVRASTNLRFVQNSNNDFLVIVINKTMND 601  
 Db 543 FLKESNSNIAKFKTYTLNSAALLQRYRVRVRASTNLRFVQNSNNDFLVIVINKTMND 602

QY 602 DDLTYQTFFLATNNSMGFGSGDKNELIIGAESFSNEKYIDKIEFKIPVQL 652  
 Db 603 DDLTYQTFFLATNNSMGFGSGDKNELIIGAESFSNEKYIDKIEFKIPVQL 653

RESULT 43  
 US-10-614-076-108  
 ; Sequence 108, Application US/10614076  
 ; Publication No. US2004033523A1

GENERAL INFORMATION:  
 ; APPLICANT: English, Leigh H.  
 ; APPLICANT: Bruscock, Susan M.  
 ; APPLICANT: Malyar, Thomas M.  
 ; APPLICANT: Bryson, James W.  
 ; APPLICANT: Kulesza, Caroline A.  
 ; APPLICANT: Walters, Frederick S.  
 ; APPLICANT: Slatin, Stephen L.  
 ; APPLICANT: Von Tersch, Michael A.

TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 FILE REFERENCE: MECC-18-11792.0218.DVUS01  
 CURRENT APPLICATION NUMBER: US/10/614,076  
 CURRENT FILING DATE: 2003-07-03  
 PRIOR APPLICATION NUMBER: 09/427,770  
 PRIOR FILING DATE: 1999-10-27  
 PRIOR APPLICATION NUMBER: 08/993,722  
 PRIOR FILING DATE: 1997-12-18  
 NUMBER OF SEQ ID NOS: 113  
 SOFTWARE: PatentIn version 3.2  
 SEQ ID NO: 108  
 LENGTH: 652  
 TYPE: PRT  
 ORGANISM: Artificial sequence  
 FEATURE:  
 OTHER INFORMATION: Recombinant delta endotoxin

US-10-614-076-108  
 Query Match 99.1%; Score 3175; DB 15; Length 652;  
 Best Local Similarity 99.2%; Pred. No. 1.5e-255;  
 Matches 647; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 MNPNRNRSEDTIKTPNSLQTNHNOYPLADPNSTLEBNYKEFLMTEDSSTEVLNDNS 60  
 Db 1 MNPNRNRSEDTIKTPNSLQTNHNOYPLADPNSTLEBNYKEFLMTEDSSTEVLNDNS 60

QY 61 TVDAVGTCISVQGILGVGVPPAGALTFSYQSLNTWPSADPKMAQEVLIDK 120  
 Db 61 TVDAVGTCISVQGILGVGVPPAGALTFSYQSLNTWPSADPKMAQEVLIDK 120

QY 121 KIEEYAKSKALAEIQLQLNINFEDYNAISWKTPLSLRSKRSQDRIRELFSQAESFRN 180  
 Db 121 KIEEYAKSKALAEIQLQLNINFEDYNAISWKTPLSLRSKRSQDRIRELFSQAESFRN 180

QY 181 SMPSFAVSKPEVFLPLPTYQAQANTHLLIKDAQVGEWYSSVEDAEPYHROLKLTOQY 240  
 Db 181 SMPSFAVSKPEVFLPLPTYQAQANTHLLIKDAQVGEWYSSVEDAEPYHROLKLTOQY 240

QY 241 TDHCVNWNVGLNGLRGSYTDWKFNRRREMTLVLIVLFPFDIIRLYSKGVKTEL 300  
 Db 241 TDHCVNWNVGLNGLRGSYTDWKFNRRREMTLVLIVLFPFDIIRLYSKGVKTEL 300

QY 301 TRDIFTDPFLSLNLQCYGPTFLSIENSTRKPHLFDVLQGIEFHTRLQPFKDSFNW 360

Db 301 TRDIFTDPFLSLNLQCYGPTFLSIENSTRKPHLFDVLQGIEFHTRLQPFKDSFNW 360

QY 361 SGNYVETRPSIGSSKTTISPPFYGDKSTEVQKLSFDGQKVRPTANTDVAWPNKGKVYLG 420  
 Db 361 SGNYVETRPSIGSSKTTISPPFYGDKSTEVQKLSFDGQKVRPTANTDVAWPNKGKVYLG 420

QY 421 VTKVDFSQYDDQNETSTQTYDSKRNGHYSQDSDQLPPETTDEPLEKAYSHQLYNAY 480  
 Db 421 VTKVDFSQYDDQNETSTQTYDSKRNGHYSQDSDQLPPETTDEPLEKAYSHQLYNAY 480

QY 481 CFLMDRRTTIPPFWTHRSVDFNTIDAEEKITOLPVVKAYALSSGASIEBGPFTGNL 540  
 Db 481 CFLMDRRTTIPPFWTHRSVDFNTIDAEEKITOLPVVKAYALSSGASIEBGPFTGNL 540

QY 541 LFKEKSSNSIAKFKTYTLNSAALLQRYRVRVRASTNLRFVQNSNNDFLVIVINKTMNK 600  
 Db 541 LFKEKSSNSIAKFKTYTLNSAALLQRYRVRVRASTNLRFVQNSNNDFLVIVINKTMNK 600

QY 601 DDDLTYQFFDLATNNSMNGFGSGDKNELIIGAESFSNEKYIDKIEFKIPVQL 652  
 Db 601 DDDLTYQFFDLATNNSMNGFGSGDKNELIIGAESFSNEKYIDKIEFKIPVQL 652

RESULT 44  
 US-10-232-665-12  
 ; Sequence 12, Application US/10232665  
 ; Publication No. US20030115630A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Romano, Charles P.  
 ; TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants  
 ; FILE REFERENCE: 38-21 (15304) Cry3Bb Improved Exp. Corn  
 ; CURRENT APPLICATION NUMBER: US/10/232,665  
 ; CURRENT FILING DATE: 2002-08-29  
 ; PRIOR APPLICATION NUMBER: US/09/377,466  
 ; PRIOR FILING DATE: 1999-08-19  
 ; NUMBER OF SEQ ID NOS: 43  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO: 12  
 ; LENGTH: 653  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: non-naturally  
 ; occurring amino acid sequence encoded by SEQ ID NO:11  
 ; OTHER INFORMATION: occurring amino acid sequence encoded by SEQ ID NO:11  
 ; NAME/KEY: PRT  
 ; LOCATION: (1..:.(1653)  
 ; OTHER INFORMATION: amino acid sequence encoded by SEQ ID NO:12  
 ; FEATURE:  
 ; NAME/KEY: PRT  
 ; LOCATION: (1..:.(1653)  
 ; OTHER INFORMATION: amino acid sequence encoded by SEQ ID NO:11  
 ; NAME/KEY: PRT  
 ; LOCATION: (1..:.(1653)  
 ; OTHER INFORMATION: amino acid sequence encoded by SEQ ID NO:12  
 ; Query Match 99.0%; Score 3373; DB 14; Length 653;  
 ; Best Local Similarity 99.2%; Pred. No. 2.2e-259;  
 ; Matches 646; Conservative 2; Mismatches 3; Indels 0; Gaps 0; .

QY 2 NPNRNRSEDTIKTPNSLQTNHNOYPLADPNSTLEBNYKEFLMTEDSSTEVLNDST 61  
 Db 3 NPNRNRSEDTIKTPNSLQTNHNOYPLADPNSTLEBNYKEFLMTEDSSTEVLNDST 62

QY 62 VDAVGTCISVQGILGVGVPPAGALTFSYQSLNTWPSADPKMAQEVLIDK 121  
 Db 63 VDAVGTCISVQGILGVGVPPAGALTFSYQSLNTWPSADPKMAQEVLIDK 122

QY 122 IEEYAKSKALAEIQLQLNINFEDYNAISWKTPLSLRSKRSQDRIRELFSQAESFRN 181  
 Db 123 IEEYAKSKALAEIQLQLNINFEDYNAISWKTPLSLRSKRSQDRIRELFSQAESFRN 182

QY 182 MPSFAVSKPEVFLPLPTYQAQANTHLLIKDAQVGEWYSSVEDAEPYHROLKLTOQY 241  
 Db 183 MPSFAVSKPEVFLPLPTYQAQANTHLLIKDAQVGEWYSSVEDAEPYHROLKLTOQY 242

QY 242 DHCVNWNVGLNGLRGSYTDWKFNRRREMTLVLIVLFPFDIIRLYSKGVKTEL 301

Db	243	DHCVNQVNGLNGRLGSGSTYDAWKENFRFREMTLTVLFLFPYDIRLYSKGVTELT	302	Db	243	DHCVNQVNGLNGRLGSGSTYDAWKENFRFREMTLTVLFLFPYDIRLYSKGVTELT	302
Qy	302	ADIFTFDIFSLNTLQEYCGPTFSIENSIRKPHLFDPYLOGLEFHTRLQPGFCKDSFNYNS	361	Qy	302	RDIFTFDIFSLNTLQEYCGPTFSIENSIRKPHLFDPYLOGLEFHTRLQPGFCKDSFNYNS	361
Db	303	RDIFTFDIFSLNTLQEYCGPTFSIENSIRKPHLFDPYLOGLEFHTRLQPGFCKDSFNYNS	362	Db	303	RDIFTFDIFSLNTLQEYCGPTFSIENSIRKPHLFDPYLOGLEFHTRLQPGFCKDSFNYNS	362
Qy	362	GNYVETRPSIGSSKTTTSPYFGDKSTEPVQKLSFDGQKVTRTANTDAWPGKVLYG	421	Qy	362	GNYVETRPSIGSSKTTTSPYFGDKSTEPVQKLSFDGQKVTRTANTDAWPGKVLYG	421
Db	363	GNYVETRPSIGSSKTTTSPYFGDKSTEPVQKLSFDGQKVTRTANTDAWPGKVLYG	422	Db	363	GNYVETRPSIGSSKTTTSPYGDSTEPVQKLSFDGQKVTRTANTDAWPGKVLYG	422
Qy	422	TKVDFSDQYDQKNETSTOTYDSKRANCHVSAQSDIDQLPPTTDEPLEKAYSHQNYAEC	481	Qy	422	TKVDFSDQYDQKNETSTOTYDSKRANCHVSAQSDIDQLPPTTDEPLEKAYSHQNYAEC	481
Db	423	TKVDFSDQYDQKNETSTQYDSKRANCHVSAQSDIDQLPPTTDEPLEKAYSHQNYAEC	482	Db	423	TKVDFSDQYDQKNETSTQYDSKRANCHVSAQSDIDQLPPTTDEPLEKAYSHQNYAEC	482
Qy	482	FLMQDRGCTIDPFTWTHRSVDFENTTDAEKITQLPVVKAYALSSGASIIQGPGETGQNLJ	541	Qy	482	FLMQDRGCTIDPFTWTHRSVDFENTTDAEKITQLPVVKAYALSSGASIIQGPGETGQNLJ	541
Db	483	FLMQDRGCTIDPFTWTHRSVDFENTTDAEKITQLPVVKAYALSSGASIIQGPGETGQNLJ	542	Db	483	FLMQDRGCTIDPFTWTHRSVDFENTTDAEKITQLPVVKAYALSSGASIIQGPGETGQNLJ	542
Qy	542	FLKESSNSIAKPKTIVNSAAILQYRVRVYASTINLRLYQNSNDFLYINKTMNKD	601	Qy	542	FLKESSNSIAKPKTIVNSAAILQYRVRVYASTINLRLYQNSNDFLYINKTMNKD	601
Db	543	FLKESSNSIAKPKTIVNSAAILQYRVRVYASTINLRLYQNSNDFLYINKTMNKD	602	Db	543	FLKESSNSIAKPKTIVNSAAILQYRVRVYASTINLRLYQNSNDFLYINKTMNKD	602
Qy	602	DDLTYQFDLATTNSNNGFSGDNELLTIGAESFSNEKIVIDKIEFIPVQL	652	Qy	602	DDLTYQFDLATTNSNMGFSQDNEELLTIGAESFSNEKIVIDKIEFIPVQL	652
Db	603	DDLTYQFDLATTNSNNGFSGDNELLTIGAESFSNEKIVIDKIEFIPVQL	653	Db	603	DDLTYQFDLATTNSNMGFSQDNEELLTIGAESFSNEKIVIDKIEFIPVQL	653
<hr/>							
RESULT 46							
			US-10-232-665-24				
			Sequence 24, Application US/10232665				
			Publication No. US20030115630A1				
			GENERAL INFORMATION:				
			APPLICANT: Romano, Charles P.				
			TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants				
			FILE REFERENCE: 38-21(15304) Cry3Bb Improved Exp. Corn				
			CURRENT APPLICATION NUMBER: US/10/232-665				
			CURRENT FILING DATE: 2002-08-29				
			PRIOR FILING DATE: 1999-08-19				
			NUMBER OF SEQ ID NOS: 43				
			SOFTWARE: PatentIn Ver. 2.0				
			SEQ ID NO: 24				
			LENGTH: 653				
			TYPE: PRT				
			ORGANISM: Artificial Sequence				
			FEATURE:				
			NAME/KEY: PRT				
			LOCATION: (1) .. (653)				
			OTHER INFORMATION: Cry3Bb1 variant 11231mv2				
			US-10-232-665-24				
<hr/>							
Qy	2	NPNNRSHDITKVTPNSLQIINHNOPLADNPNSTLEELNKYKEPLMTEDSSTEVLIDNST	61	Qy	2	NPNNRSHDITKVTPNSLQIINHNOPLADNPNSTLEELNKYKEPLMTEDSSTEVLIDNST	61
Db	3	NPNNRSHDITKVTPNSLQIINHNOPLADNPNSTLEELNKYKEPLMTEDSSTEVLIDNST	62	Db	3	NPNNRSHDITKVTPNSLQIINHNOPLADNPNSTLEELNKYKEPLMTEDSSTEVLIDNST	62
Qy	62	VKDAVGTGISVYQGQIILGVGVGPAGALTTSYOSFLNTIWIPOSDADPMKAFAQVEVLIDK	121	Qy	62	VKDAVGTGISVYQGQIILGVGVGPAGALTTSYOSFLNTIWIPOSDADPMKAFAQVEVLIDK	121
Db	63	VKDAVGTGISVYQGQIILGVGVGPAGALTTSYOSFLNTIWIPOSDADPMKAFAQVEVLIDK	122	Db	63	VKDAVGTGISVYQGQIILGVGVGPAGALTTSYOSFLNTIWIPOSDADPMKAFAQVEVLIDK	122
Qy	122	IIEYAKSKALAEQIQLQNNFEDYVNAIWSKCKTPLSLRSKQDRELQAEFQHQLKTQQT	181	Qy	122	IIEYAKSKALAEQIQLQNNFEDYVNAIWSKCKTPLSLRSKQDRELQAEFQHQLKTQQT	181
Db	123	IIEYAKSKALAEQIQLQNNFEDYVNAIWSKCKTPLSLRSKQDRELQAEFQHQLKTQQT	182	Db	123	IIEYAKSKALAEQIQLQNNFEDYVNAIWSKCKTPLSLRSKQDRELQAEFQHQLKTQQT	182
Qy	182	MPSFAVSKPEVFLPLPTIAQANTHLLKKDQVGEWGSSEDVAEFYRQLKTQQT	241	Qy	182	MPSFAVSKPEVFLPLPTIAQANTHLLKKDQVGEWGSSEDVAEFYRQLKTQQT	241
Db	183	MPSFAVSKPEVFLPLPTIAQANTHLLKKDQVGEWGSSEDVAEFYRQLKTQQT	242	Db	183	MPSFAVSKPEVFLPLPTIAQANTHLLKKDQVGEWGSSEDVAEFYRQLKTQQT	242
Qy	242	DHCVNQVNGLNGRLGSGSTYDAWKENFRFREMTLTVLFLFPYDIRLYSKGVTELT	301	Qy	242	DHCVNQVNGLNGRLGSGSTYDAWKENFRFREMTLTVLFLFPYDIRLYSKGVTELT	301

Db 243 DHCYVWYNTGLRGSTYDAWVKENRREMTLTVLDLIVLPPFYDIRLYSKGVKTEL 302  
 Qy 302 RDIFTDPFLPSLNTLQEYGPFLSIENSIRKPHLFDYLOGIEFHTRLQGYGKDSFNTWS 361  
 Db 303 RDIFTDPFLPSLNTLQEYGPFLSIENSIRKPHLFDYLOGIEFHTRLQGYGKDSFNTWS 362  
 Qy 362 GNYVETRPSIGSSKTSITSPYGDKSTEVPQKLSPDGQKTYRTANTDVAWPNQKVYLG 421  
 Db 363 GNYVETRPSIGSSKTSITSPYGDKSTEVPQKLSPDGQKTYRTANTDVAWPNQKVYLG 422  
 Qy 422 TKVDFQYDQKNETSTQYDSKRNGHVAQSDISDQLPETTDEPLEKAYSHQNLNVAE 481  
 Db 423 TKVDFQYDQKNETSTQYDSKRNGHVAQSDISDQLPETTDEPLEKAYSHQNLNVAE 482  
 Qy 482 FLMDQRGTTIPFFTMHRSVDFNTIDAKITQLPVVKAYALSGASITEGPFTGNL 541  
 Db 483 FLMDQRGTTIPFFTMHRSVDFNTIDAKITQLPVVKAYALSGASITEGPFTGNL 542  
 Qy 542 FLKESNSNIAKFKVTLNSAALLQYRYVRYASTNLRLFVQNSNNDFVIVYINKTMKD 601  
 Db 543 FLKESNSNIAKFKVTLNSAALLQYRYVRYASTNLRLFVQNSNNDFVIVYINKTMKD 602  
 Qy 602 DDLTYQTFLATTNSNMGGSGDKNELIIGAESFVSNEKYYIDKIEFIPVQL 652  
 Db 603 DDLTYQTFLATTNSNMGGSGDKNELIIGAESFVSNEKYYIDKIEFIPVQL 653  
 Db 541 LFLKESNSNIAKFKVTLNSAALLQYRYVRYASTNLRLFVQNSNNDFLVIYINKTMKD 600  
 Qy 540 LFLKESNSNIAKFKVTLNSAALLQYRYVRYASTNLRLFVQNSNNDFLVIYINKTMKD 599  
 Db 601 DDDLYQTFDATTNSNMGGDKNELIIGAESFVSNEKYYIDKIEFIPVQL 652  
 Db 600 DDDLYQTFDATTNSNMGGDKNELIIGAESFVSNEKYYIDKIEFIPVQL 651  
 RESULT 48  
 US-10-614-076-56  
 ; Sequence 56, Application US/10614076  
 ; Publication No. US20040031523A1.  
 ; GENERAL INFORMATION:  
 ; APPLICANT: English, Leigh H.  
 ; APPLICANT: Brussoch, Susan M.  
 ; APPLICANT: Malvir, Thomas M.  
 ; APPLICANT: Bryson, James W.  
 ; APPLICANT: Kulesza, Caroline A.  
 ; APPLICANT: Walters, Frederick S.  
 ; APPLICANT: Staln, Stephen L.  
 ; APPLICANT: Von Terch, Michael A.  
 ; TITLE OF INVENTION: POLYBETIPE COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS  
 ; FILE REFERENCE: MECC-218-1 11792-0218-US001  
 ; CURRENT APPLICATION NUMBER: US/10/614,076  
 ; CURRENT FILING DATE: 2003-07-03  
 ; PRIOR APPLICATION NUMBER: 09/427,770  
 ; PRIOR FILING DATE: 1999-10-27  
 ; PRIOR APPLICATION NUMBER: 08/993,722  
 ; PRIOR FILING DATE: 1997-12-18  
 ; NUMBER OF SEQ ID NOS: 113  
 ; SOFTWARE: PatentIn version 3.2  
 ; SEQ ID NO: 56  
 ; LENGTH: 651  
 ; TYPE: PRT  
 ; ORGANISM: Artificial sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Recombinant delta endotoxin  
 US-10-614-076-56

Query Match 98.8%; Score 3366.5; DB 15; Length 651;  
 Best Local Similarity 99.1%; Pred. No. 7.1e-259;  
 Matches 646; Conservative 2; Mismatches 3; Indels 1; Gaps 1;

Qy 1 MNPNRSEHDTIKTPNSLQTNHQPLADNPNSTBELLNYKEFLRMTEDSSTEVLDS 60  
 Db 1 MNPNRSEHDTIKTPNSLQTNHQPLADNPNSTBELLNYKEFLRMTEDSSTEVLDS 60  
 Qy 61 TVKDAVGTCISVQILGVGVPPAGALTFSYQSLNTWPSDADPKAFMAQYEVLDK 120  
 Db 61 TVKDAVGTCISVQILGVGVPPAGALTFSYQSLNTWPSDADPKAFMAQYEVLDK 119  
 Qy 121 KIEEYAKSKAKAELQGLQNNFEDYVNAISWKCTPLSLRSKRSQDRLEFSQAEHFRN 180  
 Db 120 KIEEYAKSKAKAELQGLQNNFEDYVNAISWKCTPLSLRNPHSQRLRELFQAEHFRN 179

Qy 181 SMPSFAVSKPEVLFPLPTVQAANTHLLLKDAQVGEWNGYSSEDVAEPYHQLKLTQY 240  
 Db 180 SMPSFAVSKPEVLFPLPTVQAANTHLLLKDAQVGEWNGYSSEDVAEPYHQLKLTQY 239  
 Qy 241 TDHCYVWYNTGLRGSTYDAWVKENRREMTLTVLDLIVLPPFYDIRLYSKGVKTEL 300  
 Db 240 TDHCYVWYNTGLRGSTYDAWVKENRREMTLTVLDLIVLPPFYDIRLYSKGVKTEL 299  
 Qy 301 TRDIFTDPFLPSLNTLQEYGPFLSIENSIRKPHLFDYLOGIEFHTRLQGYFSDSENW 360  
 Db 300 TRDIFTDPFLPSLNTLQEYGPFLSIENSIRKPHLFDYLOGIEFHTRLQGYFSDSENW 359  
 Qy 361 SGNYVETRPSIGSSKTSITSPYGDKSTEVPQKLSPDGQKTYRTANTDVAWPNQKVYLG 420  
 Db 360 SGNYVETRPSIGSSKTSITSPYGDKSTEVPQKLSPDGQKTYRTANTDVAWPNQKVYLG 419  
 Qy 421 VTKDFQYDQKNETSTQYDSKRNGHVAQSDISDQLPETTDEPLEKAYSHQNLNVAE 480  
 Db 420 VTKDFQYDQKNETSTQYDSKRNGHVAQSDISDQLPETTDEPLEKAYSHQNLNVAE 479  
 Qy 481 CFUMQDRGTTIPFFTMHRSVDFNTIDAKITQLPVVKAYALSGASITEGPFTGNL 540  
 Db 480 CFUMQDRGTTIPFFTMHRSVDFNTIDAKITQLPVVKAYALSGASITEGPFTGNL 539  
 Qy 541 LFLKESNSNIAKFKVTLNSAALLQYRYVRYASTNLRLFVQNSNNDFLVIYINKTMKD 600  
 Db 540 LFLKESNSNIAKFKVTLNSAALLQYRYVRYASTNLRLFVQNSNNDFLVIYINKTMKD 599  
 Qy 601 DDDLYQTFDATTNSNMGGDKNELIIGAESFVSNEKYYIDKIEFIPVQL 652  
 Db 600 DDDLYQTFDATTNSNMGGDKNELIIGAESFVSNEKYYIDKIEFIPVQL 651  
 RESULT 49  
 US-10-332-665-10  
 ; Sequence 10, Application US/10232665  
 ; Publication No. US20030115630A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Romano, Charles P.  
 ; TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants  
 ; FILE REFERENCE: 38-21 (15304) Cry3Bb Improved Exp. Corn  
 ; CURRENT APPLICATION NUMBER: US/10/232,665  
 ; CURRENT FILING DATE: 2003-08-29  
 ; PRIOR APPLICATION NUMBER: US/09/377,466  
 ; PRIOR FILING DATE: 1999-08-19  
 ; NUMBER OF SEQ ID NOS: 43  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 10  
 ; LENGTH: 653  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: non-naturally  
 ; OTHER INFORMATION: occurring amino acid sequence encoded by SEQ ID NO:9  
 ; FEATURE:  
 ; NAME/KEY: PRT  
 ; LOCATION: (1).. (653)  
 ; OTHER INFORMATION: amino acid sequence encoded by SEQ ID NO:9  
 US-10-332-665-10

Query Match 98.8%; Score 3366; DB 14; Length 653;  
 Best Local Similarity 99.1%; Pred. No. 7.8e-259;  
 Matches 645; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

Qy 2 NPNNRSEHDTIKTPNSLQTNHQPLADNPNSTBELLNYKEFLRMTEDSSTEVLDS 61  
 Db 3 NPNNRSEHDTIKTPNSLQTNHQPLADNPNSTBELLNYKEFLRMTEDSSTEVLDS 62  
 Qy 62 VKDAGTCISVQILGVGVPPAGALTFSYQSLNTWPSDADPKAFMAQYEVLDK 121  
 Db 63 VKDAGTCISVQILGVGVPPAGALTFSYQSLNTWPSDADPKAFMAQYEVLDK 122

RESULT 49  
 US-10-232-665-18  
 ; Sequence 18, Application US/10232665  
 ; Publication No. US20030115630A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Romano, Charles P.  
 ; TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants  
 ; FILE REFERENCE: 38-21(15304) Cry3Bb Improved Exp. Corn  
 ; CURRENT APPLICATION NUMBER: US/10/232,665  
 ; CURRENT FILING DATE: 2002-08-29  
 ; PRIOR APPLICATION NUMBER: US/09/377,466  
 ; PRIOR FILING DATE: 1999-08-19  
 ; NUMBER OF SEQ ID NOS: 43  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 18  
 ; LENGTH: 653  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; NAME/KEY: PRT  
 ; LOCATION: (1)..(653)  
 ; OTHER INFORMATION: Cry3Bb1 variant 11231mv1  
 US-10-232-665-18

Query Match 98.8%; Score 3366; DB 14; Length 653;  
 Best Local Similarity 99.1%; Pred. No. 7.8e-259; Matches 645;保守性 2; Mismatches 4; Indels 0; Gaps 0; Length 653;

Qy 122 IEEYAKSKALAAELOGIQQNFEDYVNALNSWCKTPLSLRSKRSQDRIRELFSQAESHFRNS 181  
 Db 123 IEEYAKSKALAAELOGIQQNFEDYVNALNSWCKTPLSLRSKRSQDRIRELFSQAESHFRNS 182

Qy 182 MPSFAVKSEKFLFLPtyAAQANTHLLLKDQVGEWGSSEDYAEFYRQLKLTQQT 241  
 Db 183 MPSFAVKSEKFLFLPtyAAQANTHLLLKDQVGEWGSSEDYAEFYRQLKLTQQT 242

Qy 242 DHCVNWNVNGLRLGSTYDAWKNRPREMTLTVLDLIVLFPFDIIRLYSKGKTEL 301  
 Db 243 DHCVNWNVNGLRLGSTYDAWKNRPREMTLTVLDLIVLFPFDIIRLYSKGKTEL 302

Qy 302 RDIFTDPISLNTLQFYGPTFLSIENSIRKPHFLDYLQGKGDSEFNYWS 361  
 Db 303 RDIFTDPISLNTLQFYGPTFLSIENSIRKPHFLDYLQGKGDSEFNYWS 362

Qy 362 GNYVETRSPGSSKTTISPFYGDKSTEPVKQLSFQDGKVTIANTDVAWPGNGKVLGV 421  
 Db 363 GNYVETRSPGSSKTTISPFYGDKSTEPVKQLSFQDGKVTIANTDVAWPGNGKVLGV 422

Qy 422 TKVDFSYQDDQNETSTQYDSKRNGHVSQDSDQPLPPTTDELEYASHOLNYAEC 481  
 Db 423 TKVDFSYQDDQNETSTQYDSKRNGHVSQDSDQPLPPTTDELEYASHOLNYAEC 482

Qy 482 FLMDQRGTTIPFTWTHRSVDFNTIDAETKLTQLPVVKAYALSGASITBSPGFTCGNLL 541  
 Db 483 FLMDQRGTTIPFTWTHRSVDFNTIDAETKLTQLPVVKAYALSGASITBSPGFTCGNLL 542

Qy 542 FLKESSNSIAKFKVTLNSAALLQYRVRIRYASTTMLRFVQNSNNDFLVYINKTMNKD 601  
 Db 543 FLKESSNSIAKFKVTLNSAALLQYRVRIRYASTTMLRFVQNSNNDFLVYINKTMNKD 602

Qy 602 DDLTYQFDLATTNSNMGFSQDKNEELIGAESFSVNEK1YDKIEFIPVQL 652  
 Db 603 DDLTYQFDLATTNSNMGFSQDKNEELIGAESFSVNEK1YDKIEFIPVQL 653

RESULT 50  
 US-10-232-665-20  
 ; Sequence 20, Application US/10232665  
 ; Publication No. US20030115630A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Romano, Charles P.  
 ; TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants  
 ; FILE REFERENCE: 38-21(15304) Cry3Bb Improved Exp. Corn  
 ; CURRENT APPLICATION NUMBER: US/10/232,665  
 ; CURRENT FILING DATE: 2002-08-29  
 ; PRIOR APPLICATION NUMBER: US/09/377,466  
 ; PRIOR FILING DATE: 1999-08-19  
 ; NUMBER OF SEQ ID NOS: 43  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 20  
 ; LENGTH: 653  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; NAME/KEY: PRT  
 ; LOCATION: (1)..(653)  
 ; OTHER INFORMATION: Cry3Bb1 variant 11231mv1  
 US-10-232-665-20

Query Match 98.8%; Score 3366; DB 14; Length 653;  
 Best Local Similarity 99.1%; Pred. No. 7.8e-259; Matches 645;保守性 2; Mismatches 4; Indels 0; Gaps 0; Length 653;

Qy 2 NPNNRSEHDTIKVTPNSELQTNHNOPLADNPNSTLEELYKEFLRMTEDSSTEVLNDST 61  
 Db 3 NPNNRSEHDTIKVTPNSELQTNHNOPLADNPNSTLEELYKEFLRMTEDSSTEVLNDST 62

Qy 62 VKDAVGIGISVYGVQIIGVYGFAGALTTSYOSFLNTIWPSDADPKAFWVQVEVLIDKK 121  
 Db 63 VKDAVGIGISVYGVQIIGVYGFAGALTTSYOSFLNTIWPSDADPKAFWVQVEVLIDKK 122

Qy	122	I E E Y A K S K A L A E L O G L O N N F E D Y N A L N S W K K T P L S I R S K R S Q D R I E L F S Q E S H F R N S	181
Db	123	I E E Y A K S K A L A E L O G L O N N F E D Y N A L N S W K K T P L S I R S K R S Q D R I E L F S Q E S H F R N S	182
Qy	182	M P S F A V S K P E V L F L P T Y A A Q A N T H L L K D A Q V F G E E M G Y S S E D A E F V H Q R L Q T Q O Y T	241
Db	183	M P S F A V S K P E V L F L P T Y A A Q A N T H L L K D A Q V F G E E M G Y S S E D A E F V H Q R L Q T Q O Y T	242
Qy	242	D H C Y N W Y N G L G N G L R G S T Y D A W Y K F N R F R E M T L T V L D I L V L F P Y D I R L Y S K G V K T E L T	301
Db	243	D H C Y N W Y N G L G N G L R G S T Y D A W Y K F N R F R E M T L T V L D I L V L F P Y D I R L Y S K G V K T E L T	302
Qy	302	R D I F T D P I E S L N T L Q E Y G P T E L S T E N S I R K P H I F D Y L Q G I E F T R L Q P Q Y F G K D S E N Y W S	361
Db	303	R D I F T D P I E S L N T L Q E Y G P T E L S T E N S I R K P H I F D Y L Q G I E F T R L Q P Q Y F G K D S E N Y W S	362
Qy	362	G N Y V E T R P I G S S K T I T S P Y G D K S T E P V Q K L S F D G Q V Y R T A N T D V A W P N G K Y I L G	421
Db	363	G N Y V E T R P I G S S K T I T S P Y G D K S T E P V Q K L S F D G Q V Y R T A N T D V A W P N G K Y I L G	422
Qy	422	T K V D F S Q Y D D Q R K E T S T Q Y D S K R N N G H Y S A Q D S I D Q L P P E T T D E P L E K A Y S H Q L N Y A E C	481
Db	423	T K V D F S Q Y D D Q R K E T S T Q Y D S K R N N G H Y S A Q D S I D Q L P P E T T D E P L E K A Y S H Q L N Y A E C	482
Qy	492	F L M Q D R R G T I P F F T W H R S V D F F N T I D A K I T Q P V V K A Y A L S S G A S T I E G P G F T G G N L	541
Db	493	F L M Q D R R G T I P F F T W H R S V D F F N T I D A K I T Q P V V K A Y A L S S G A S T I E G P G F T G G N L	542
Qy	542	F L K E S S N S I A K F Y T L N S A L L O R Y R V R Y A S T T N L R F V Q N S N N D P L V I Y I N K T M N D	601
Db	543	F L K E S S N S I A K F Y T L N S A L L O R Y R V R Y A S T T N L R F V Q N S N N D P L V I Y I N K T M N D	602
Qy	602	D D I T Y Q T F F L A T T N S N M G S G D K N E L I T G A E S F V S N E K I Y I D K I E F I P V Q L	652
Db	603	D D I T Y Q T F F L A T T N S N M G S G D K N E L I T G A E S F V S N E K I Y I D K I E F I P V Q L	653

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